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THE MATERIALS OF READING

THEIR SELECTION AND ORGANIZATION

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PREFACE

EVERY supervisor and teacher of reading and literature is required to select and organize content for his courses. Even if a course of study is uniform for a city or state, the successful teacher must supplement and reorganize the prescribed content to meet the needs of a particular class. The purpose of this book is to facilitate such selection and organization by presenting an interpretation of the experiences of thousands of teachers and the conclusions of many investigators. This book is, therefore, intended for all teachers and prospective teachers of reading and literature.

No course of study can be successfully planned without reference to teaching conditions as well as to teaching materials. Consequently, this book, although concerned primarily with the content of courses, contains chapters upon laboratory investigations, classroom teaching, testing, and diagnostic and remedial work. The standards formulated in the last section of this book are based upon the scientific investigations and classroom experiences discussed in the earlier sections. These standards are, therefore, not merely theoretical but are scientifically determined and practical.

The author is especially indebted to Professor Charles H. Judd and Dean William S. Gray of the School of Education of the University of Chicago for their aid during a prolonged investigation of elementary school reading

materials. Helpful suggestions have been received from Professors V. A. C. Henmon and Frank L. Clapp of the School of Education of the University of Wisconsin. For the laborious task of reading the manuscript of this book, gratitude is acknowledged to Professor John Guy Fowlkes of the School of Education of the University of Wisconsin, and to Dr. Worth J. Osburn, Director of Educational Measurements of the State Department of Public Instruction of Wisconsin. Appreciation is expressed also to thousands of teachers and pupils without whose coöperation the original investigations here reported would have been impossible.

A considerable part of the discussion of the author's own investigation of elementary school reading has already appeared as a University of Wisconsin publication. Acknowledgment is made for the permission to adapt this material for the present book. Finally, acknowledgment is made of the courtesy of publishers and authors in granting the privilege of using quotations in vitalizing the discussions of important investigations.

WILLIS L. UHL

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PART I

RECENT INVESTIGATIONS OF THE ORGANIZATION OF COURSES IN READING AND LITERATURE

CHAPTER I

WHY AND HOW THE ORGANIZATION OF READING MATERIALS HAS BEEN INVESTIGATED

Why the organization of reading has been investigated; the cost of teaching reading; money and time. Americans tax themselves more and more heavily each decade in order to provide facilities for the teaching of reading. Before America entered the Great War, many cities were asked to pay in excess of one dollar a year for each inhabitant to support courses in reading. At the same time, children spent over six weeks of each school year in reading and literature classes in addition to the time required outside the actual class periods.

During these years, practical economists were disclosing to manufacturers the exact costs of factory operations. The automobile manufacturer, for example, was informed of the cost of each unit of labor, each unit of raw material, and each unit of factory space. Not only were financial expenditures examined; expenditures of time and effort were also closely studied. It was found upon investigation that certain operatives spent from two to five times as much time and effort as their work actually required.

Little wonder, then, that schoolmen set themselves the task of developing new and accurate measures of the effi-

ciency of classroom activities. They felt the need of more careful accounting of expenditures and a more exacting evaluation of results. This need led to precise statements of the time allotted to reading, critical analyses of the means and methods employed in reading, and to standardized devices for measuring the products of the reading course. It was readily found that the elementary reading course was receiving approximately sixty per cent more recitation time than any other school subject.[1] At the same time it was found that reading was receiving from three to six times as many minutes per day in certain representative cities as in others, and that the amount of time spent was by no means a measure of the results attained. In the high school most pupils were carrying four subjects, one of which was English. The equivalent of three of the four years commonly given to English was spent upon English literature. By combining the time allotments of the elementary school and the high school, it was found that reading and literature constituted the most favored course in the schools.[2]

The importance of reading and literature. Another reason why the content of reading and literature courses has been investigated is that these courses are not only very important in themselves but also are basic for other courses. For decades, teachers of arithmetic have charged much of the inferior work done in their classes to their pupils' inability to read accurately. Likewise, many pupils in history and geography classes cannot distinguish between the

[1] Holmes, H. W. Time Distributions by Subjects and Grades in Representative Cities. *National Society for the Study of Education, Fourteenth Yearbook*, Part I, p. 25. 1915.

[2] This statement holds only for the time allowance. The expenditure in dollars for each pupil in high-school literature is, in many schools, a small fraction of the expenditure for each pupil in science. Cf. *The Labor and Cost of the Teaching of English in Colleges and Secondary Schools*. National Council of Teachers of English, 1923; especially pp. 12–16.

important and the unimportant statements in their books; this deficiency is due largely to poor reading ability and is overcome by appropriate training in silent reading.[1] Examples of pupils whose reading deficiencies interfere with their school work will be given in Chapter XI. Any course of training that is so important as reading cannot go unchallenged in the midst of an investigative body of teachers.

Development of the technique of measurement. So long as progress in reading was measured by the subjective standards of teachers and supervisors, investigations of reading were too difficult and uncertain to be alluring. Under those conditions teachers were often able to judge the status of their pupils fairly accurately, but many present-day possibilities escaped notice. It was impossible to make accurate comparisons of the work accomplished in different schools of the same system or in different school systems; it was impossible to find out quickly the individual differences among pupils, and to use an accurate numerical term to show the relative positions of pupils within a class.

With the expansion and refinement of the technique of measurement came the possibility of describing a reading class in reliable, comparable, and objective terms — terms which vary but little even though derived by different persons. The appearance of this technique was a challenge to teachers and supervisors. Such questions as the following now arose: Is my class maintaining the proper standards? Are my schools attaining as good results as those attained in neighboring cities? Do the results of tests in my schools show that our teachers are emphasizing the proper aspects of reading? Such questions quickly ruled out of court an attitude of smug complacency or an

[1] Dr. W. J. Osburn reports that approximately twenty per cent of the errors in working arithmetical reasoning problems are due to faulty reading of the problems.

attitude of indifference to the results of this new technique. Teachers and supervisors who had already begun to question the methods and content of reading and literature courses, quickly seized upon this technique as a welcome relief from the earlier and unsatisfactory attempts to measure results without a yardstick.

Development of methodology. If only one method for the teaching of reading existed, there would be only one way for improving such teaching, that is, by perfecting the method. Instead of this simple situation, many methods for teaching reading existed at the beginning of this century. Besides, each of these methods was stoutly defended by rival methodologists and publishing companies. The supervisor and teacher were challenged. If a certain method was selected for use, one desired to know why the method was the best, what evidences there were to support the claims made for the method, and how much better this method was than other methods. Not only were different methods clamoring for attention and use; new materials of instruction with their own new methods were developed by ambitious teachers and urged upon the teaching public. With many methods, some old, some new, and all enthusiastically praised, teachers and supervisors were called in self-defense to investigate the methods which they were using and other methods which claimed superiority to those already in use.

How the organization of reading has been investigated; critical study of the objectives of reading and literature courses. Critical evaluation of courses in reading and literature has developed from two lines of study. In the first place, the present objectives of courses in reading and literature were catalogued and scrutinized. Outstanding results of the study of pre-war objectives were that elementary-school courses in reading were especially designed

to teach children how to read in a well-rounded, modulated voice, and that courses in arithmetic, history, and geography were commonly used incidentally to train pupils for the type of reading which is most common among adults, namely, silent reading. High-school courses in literature showed by their practices that their chief objective was training in the analysis of " masterpieces significant in the development of English literature." [1]

Critical evaluation of the objectives of courses in reading and literature has developed, in the second place, by ascertaining the needs of school children and adults. A study of these needs has shown that in form, at least, certain of the existing objectives were correct. For example, it has shown that the ability to read orally is desirable — a point which is readily granted by all observers of home and business conditions. Also, the study of the needs of children and adults has shown the value of an acquaintance with literary masterpieces — another point which no one who claims the comforts of even meager culture will deny. Instead, however, of abandoning the earlier objectives of courses in reading and literature, it became evident that these objectives ought to be supplemented by other and possibly more important ones.

Instead of devoting the entire elementary-school reading course to an attempt to teach oral reading, teachers began to reorganize the course, for it became clear that silent reading should receive emphasis during the later grades, if not throughout the course. With the adoption of silent reading came the need for further analysis of objectives of instruction in reading and literature and a restatement of those objectives. This analysis has shown that there are many kinds of silent reading in the daily life of adults each

[1] Hosic, J. F. (Compiler). *Reorganization of English in Secondary Schools.* United States Bureau of Education Bulletin 1917, No. 2, p. 21.

of which may require specific methods and means for its mastery.

Instead of devoting the high-school course in literature to an attempt to cultivate interest in a few literary masterpieces, teachers enlarged the scope of the course because the need for opening a broad field of worthy reading became evident. To this end teachers of English have catalogued numerous books of great variety and have attempted to reorganize their courses. This reorganization has been designed to facilitate the cultivation of literary appreciation and also to open to pupils the large store of material, both literary and informational, to which a person of high-school caliber can properly demand access.

Analysis of types of reading materials. The shift of emphasis to silent reading in the elementary school and the broadened purposes of the high school necessitated an analysis of reading materials. Consequently, the old and used materials as well as possible new materials, have been analyzed with reference to the needs and interests of children and adults. Upon this basis, materials have been analyzed as to their availability for drill in silent reading. When viewed in this way, certain literary selections were found impracticable for two reasons: first, literary materials are not designed for use as drill exercises and lose their savor when so used; and, second, silent reading ability is made up of a large number of skills which require for their cultivation a miscellany of materials comparable with the variety of student and adult reading. Possible new materials for reading have, therefore, been analyzed with a view to using them for drill and for practice in reading geography, travel, science, and invention. Furthermore, the organization of reading materials has been examined with reference to project work; this aspect of the analysis has shown that if reading is to hold its basic position, its

offerings must consist of a variety of usable content properly organized for progressive teachers.

Empirical results. The organization and content of reading materials have been judged by their everyday results. These results have been obtained by means of questionnaires and stenographic reports of classroom activities. Thousands of teachers and pupils have made formal reports upon thousands of reading and literary selections used in elementary and high schools. These reports of the rank and file of teachers have been compared with the stenographic reports of actual lessons. In this way it has been possible to compare the results reported by the rank and file of teachers with the results achieved under known conditions.

Standardized measurements and laboratory investigations. By the year 1914 there seemed to be little doubt that spelling ability could be accurately measured. Many persons were then willing to grant also that the Courtis tests measured some of the formal aspects of arithmetical achievement with nicety. But reading ability — could so complicated a possession be measured?

Grave doubt was expressed whether reading ability could ever be measured because of the different standards of teachers and supervisors. Supervisor A defined excellent reading in terms of the mastery of the mechanics of reading. Supervisor B judged reading good or bad according to the " expression " given by the pupils. Supervisor A might measure mechanics, it was granted, but neither he nor Supervisor B could measure the intangible thing called expression. This was the deadlock faced by men who sought to measure reading ability. In the end, it was pointed out that persons who read " with expression " must have mastered the mechanics of reading; therefore, it was argued that some, if not all, of the elements of good reading

are measured when the mechanics are measured. Upon this basis were developed plans for measuring certain mechanical processes of reading and the ability to comprehend what is read.

Not only were reading processes subjected to measurement; they were also subjected to something analogous to microscopic analysis. With the onset of laboratory investigations of reading, investigators devised apparatus which measured, photographed, and recorded on electrically controlled receivers an analytical view of each reader's processes.

Checking of methods, content, and aims against results attained. Investigations of the means and methods employed in reading have been disconcerting. It has been found that certain schools have tried to develop processes which other schools have in the same courses attempted to eliminate. It has been found that much of the content of reading courses is unsatisfactory, qualitatively and quantitatively, to both teachers and pupils; many school systems have offered only as much reading matter as an intelligent high-school boy could read in a few hours. Much that passes under the name of reading is in reality only analysis. Among the worst offenders in this respect are certain high schools whose combined literary offerings could be read by an intelligent student in less than 100 hours.

The investigation of methods has shown that, although many teachers employ skillful and artistic methods, a far larger number naïvely allow their pupils to teach themselves. Between these extremes are formalists who induce apathetic readers to engage in a still more apathetic use of dictionaries; other formalists who engender a hatred of literature by using reading periods for a cross-examination of pupils; and still other formalists who cling to the time-

consuming " read and tell " method. And all this is reading and literature!

Summary. This chapter has stated some of the reasons why the selection and organization of reading materials have been investigated and how the investigations have been conducted. The following reasons have been assigned for the investigations: the cost of reading courses in both time and money, the basic importance of reading, the development of the technique of measurement of reading, and the development of the methodology of teaching reading. The following types of investigation have been mentioned: critical analysis of the objectives of reading and literature, analysis of reading materials, judging the results of teaching reading by observation, standardized measurements, laboratory investigation, and finally the checking of methods, content, and aims against the results attained.

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CHAPTER II

THE VOCABULARIES OF READERS

The different vocabularies — reading, writing, and speaking. The attention of educators has recently been called to the great differences between the vocabularies which are used for different purposes. These differences are recognized as soon as they are mentioned. So different is the spoken vocabulary from the reading vocabulary that one recognizes and describes as bookish the person who introduces too freely into his conversation the vocabulary of the literature which he reads. The teacher has a more or less happy knack of detecting, surely and quickly, too close a similarity between the vocabulary as well as the "style" in which her pupils write and that used by the authors whom they read — and sometimes copy.

Although the majority of persons require a reading vocabulary which is much larger than their writing or speaking vocabularies, there is one important condition which affects in part the ease of mastering the reading vocabulary. The context of the matter which one reads is an aid in the interpretation of words which are wholly or partly unfamiliar. For many of these words, the context is the reader's only clew to their meaning; he could not define them if they stood alone, nor could he use them in writing or in speaking. The reading vocabulary, therefore, need not be mastered in the same way that one masters one's speaking and writing vocabularies.

The dependence upon context suffices for certain types or levels of reading. The reading of the following passage by a sixth-grade pupil illustrates this point.

"But he was not wanting in efforts to prevent a calamity so dire. There was one man who could have instantly frustrated the scheme by his veto — Mr. Adams, the president, with whom Jefferson, with that indomitable good-nature and inexhaustible tolerance of his, had maintained friendly relations through all the mad strife of the last years." [1]

Before the passage was read the three words, *dire*, *frustrated*, and *indomitable* were given to the pupil to define. The word *dire* was somewhat familiar and its meaning was described by saying "dire circumstances." The other two words were not defined at all. After the passage was read, however, *dire* was paraphrased as " bad " or " distressing " ; *frustrated* was understood to mean " stopped " ; *indomitable* was defined indirectly by taking a cue from the phrase *inexhaustible tolerance*. First, *indomitable good-nature* was defined as " strong " and then, without further suggestions, as " can't be put down." Obviously, the word *dire* might have been used cautiously by this pupil when writing or speaking, but the words *frustrated* and *indomitable* could not. In spite of these vocabulary difficulties this pupil was able to give clearly the gist of the passage.

At other levels, however, such dependence upon context is not possible. For example, the following rule from an arithmetic used by our stalwart ancestors contains several words whose meanings are not made clear by the context. This rule falls under the topic, " Tare and Trett " :

"Deduct the tare and trett, divide the suttle by 168, and the quotient will be the cloff, which subtract from the suttle, and the remainder will be the neat." [2] Clearly, one

[1] Parton, Amos. *Life of Thomas Jefferson*. J. R. Osgood and Company, 1874. Pp. 578–579.

[2] Pike, Nicholas. *A New and Complete System of Arithmetic*. 1788. P. 192.

needs absolute knowledge of several terms contained in this rule in order to be guided by it.

The extent to which one's reading vocabulary influences one's comprehension is suggested by the example just given of a sixth-grade pupil's reading. That pupil stated clearly the meaning of the passage read, but she did so only as the result of questioning. She would not have comprehended the meaning of the passage, had she read it independently. Her method was, judging from the comments which she made, that of relating possible meanings to the portions of the passage which she did understand. Her method of reading this passage was not unlike that of filling in blanks in sentences as in a completion test. There is no doubt of the decrease in her speed of comprehension on account of her tardy understanding of the difficult words. Such reading, in spite of its success, shows clearly the need for an extensive reading vocabulary, and also that the reading vocabulary itself can be greatly extended by thoughtful reading.

The influence of one's reading vocabulary upon the enjoyment of one's reading has never been measured. Some readers seem to enjoy the puzzle element involved in the reading of very difficult material; the vocabulary difficulties may add to the interest which these persons show in such materials. There is probably a much larger group of persons who are deterred from certain forms of literary adventure by vocabulary difficulties. Such readers resemble students who have only partially acquired a vocabulary in a foreign language; such students seldom find pleasure in reading the literature written in the foreign language. If it is true that an inadequate reading vocabulary deters many persons from reading, then we can say with assurance that these persons fail to develop interests because of this lack of vocabulary power; for reading has a demonstrable

effect upon the development of interests just as one's interests have a pronounced effect upon the extent of one's reading.

In view of the importance of the reading vocabulary, we may well consider its size and character. The reading vocabulary must be large if a wide range of literature is either to be comprehended or enjoyed; its character must be representative of the requirements of one's reading in order to yield the greatest possible return. Consequently, two problems of the reading vocabulary demand our attention: first, that of selecting representative words for the reading vocabulary, and, second, that of extending the vocabulary so that it will include as many of these representative words as the reader needs for his vocational or cultural development.

Bases for selecting the reading vocabulary. There have been and now are, various bases for the selection of the vocabularies of school courses in reading. First, subject matter can be selected for its content value and with little reference to its vocabulary. Examples of such selection are numerous in the reading material used during the colonial period. The hornbook, which was used in both England and America as an introduction to reading, contained the Lord's Prayer and one or two other forms of ritual in addition to the alphabet, vowels, combinations of vowels, and the Roman numerals. Likewise, the famous *New England Primer*, especially the Puritan edition, contained drill words selected for their relation to religious subject matter rather than for their relation to general reading matter. For example, the significance of the letters *C*, *D*, and *E* is shown by the following couplets:

C
Christ crucified
For sinners died.

D
The Deluge drowned
The Earth around.

E
Elijah hid
By ravens fed.

Following this drill came the catechism, the Lord's Prayer, the Apostles' Creed, and other material chosen for its religious and moral significance.

"The book closes with a tragic scene in which Youth, after alternately listening to the admonitions of Christ and the solicitations of the Devil, weighs his destiny, vacillates, and finally chooses the evil and goes to hell." [1]

Second, the reading vocabulary can be selected so as to have words of apparently increasing difficulty. For example, a very modest beginning in the grading of vocabularies was made in the *Pestalozzian Primer*, produced in 1826. Although the words lack careful organization into sequences and do not necessarily appeal to children, there is here a breaking away from the plan of trying to make the content of reading courses subservient to heavy literature as in colonial days. In this book the words for Lesson I are: *apple, peach, dog;* for Lesson II, *leather, cloth, cat, butter;* for another lesson, *wood, stones, cotton, salt.* Later in the book, "generalizing lessons" are introduced, for example, "What things are cold, hot, hard, soft?" "Bitter, brown, blue, bright?" [2] Still more careful grading of the vocabulary is exhibited in Cobb's *Juvenile Readers* which

[1] Reeder, Rudolph R. *Historical Development of School Readers and of Method in Teaching Reading.* Columbia University. Contributions to Philosophy, Psychology, and Education, Vol. VIII, No. 2, p. 92. 1900.
[2] Reeder, *op. cit.*, p. 42.

were published in 1831. "All words in each lesson not contained in the preceding lessons were placed before it with the divisions, pronunciation, accentuation, and definition noted." [1]

Third, reading courses can be planned so as to contain words which exemplify drills upon phonetics. Excellent concentration upon mechanics has been achieved in this way. This method when dominant has, however, the fault of requiring a large amount of time for drill upon phonograms and the words related thereto, and a corresponding lack of time for the reading of selections which are in themselves valuable. This method assumes that children cannot be given sufficient phonetic drill either in a separate phonetics class or as incidental work in the reading class. Only by means external to the content used can such a method be made interesting. Consequently, this method, when successful, has been facilitated by many ingenious devices, as games in which "word-families" are introduced.

Fourth, words can be carefully selected as to difficulty but at the same time dependent upon the character of the subject matter to be read. This plan of selection is exemplified by the use of folklore in the books for the primary grades. As an example of this method, the *Progressive Road to Reading*, which appeared in 1909,[2] depends upon the child's vital interest in stories as a stimulus to learning. Preparatory to word study, pupils who follow the *Progressive* method hear the story, talk about the story, and at times do construction work, and retell the story. In contrast with the first method of selecting the vocabulary, that of choosing subject matter without reference to the vocabulary, this method is so planned as to introduce new words

[1] Quoted from Reeder, p. 48.
[2] Silver, Burdett and Company.

slowly and then give drill both specifically and incidentally upon words which have already appeared.

Fifth, words can be selected with reference to the child's reading needs. This basis of selection differs from the fourth in that the pupils taught on this basis use their reading vocabulary as a guide to their action and as an outgrowth of their everyday experience. The fourth basis admits, on the contrary, the plan of having pupils read material which is interesting to them, although the material may be very remote from their daily lives. Miss Watkins's [1] plan is so organized that children learn to read directions for their own work from the first day of school. For example, the first lesson is the " Come to the class " lesson; in this lesson the children learn " Come to the class " and " Go to your seats." Another example of the use of the same basis is the Courtis plan. According to Courtis's plan, the children are equipped with materials for activities which are interesting to them. Among the equipment is an illustrated " dictionary," so constructed that children find in it the words signified by the accompanying pictures. The pupils are thus enabled to identify and comprehend the words found outside their " dictionaries." In this way, pupils are soon able to follow printed directions.[2]

Sixth, the vocabulary can be selected with reference both to the difficulty of words and the child's reading needs. Both of these criteria are employed when either the Watkins or the Courtis plan is used in conjunction with the better primary books now on the market. Such a combination has the advantage of giving a vital motive to read-

[1] Watkins, Emma. *How to Teach Silent Reading to Beginners.* Lippincott, 1922.

[2] Heller, R. R. and Courtis, S. A. Exercises Developed at Detroit for Making Reading Function. *National Society for the Study of Education, Twentieth Yearbook,* Part II, 153–161. 1921.

ing and at the same time building up a vocabulary which is closely related to children's needs.

Determination of the reading vocabulary. Discussions of the economy of time have led to a questioning of the validity of drills designed to increase the reading, writing, and speaking vocabularies of children. These discussions have called attention to the differences between these three vocabularies and also to the individual needs of different persons for each of these kinds of vocabularies.

Since most persons seldom indulge in writing except for correspondence, the vocabulary of such writing is commonly referred to as the spelling or writing vocabulary. The size of this vocabulary is shown by three representative studies. Although these studies were conducted primarily as foundational investigations of spelling, their results are relevant to reading, because the reading vocabulary includes the spelling or writing vocabulary.

The most widely known study is that of Ayres, which was made in 1913. "This study consisted of the tabulation of 23,623 words from 2,000 short letters written by 2,000 people. The total vocabulary used was found to consist of 2,001 different words and the number of appearances was reported." [1]

The second study was reported by Cook and O'Shea in 1914.[2] Their material consisted of family correspondence of thirteen adults. This correspondence was tabulated and found to contain 200,000 running words and a total of 5,200 different words. A similar study by Anderson was based upon the private correspondence of students.[3] This

[1] Ayres, L. P. *A Measuring Scale for Ability in Spelling.* The Russell Sage Foundation, 1915.

[2] Cook, W. A. and O'Shea, M. V. *The Child and His Spelling.* The Bobbs-Merrill Company, 1914.

[3] Anderson, W. N. *Determination of a Spelling Vocabulary Based upon Written Correspondence. University of Iowa Studies in Education,* Vol. II, No. 1. 1921.

study consisted of the tabulation of over 360,000 words contained in six different kinds of letters: professional, business, domestic, miscellaneous, personal, and farmers'. Anderson found slightly over 3,000 different words with a frequency of five or more and also appearing in at least three of the six kinds of letters.

In order to determine the reading vocabulary of any person or group of persons, an actual tabulation of the words which occur in their reading is necessary. Inasmuch as school primers and first readers constitute the earliest and most common reading of all persons, the vocabulary studies have centered about school books. Another reason for attacking the problem in this way is that the cost of making a study of high-school pupils' and adults' vocabulary needs has deterred investigators from making a more extensive count of words.

TABLE I

Number and Frequency of Different Words Introduced in Each of Twelve Beginning Readers
(Quoted from the Selke study)

Method	No. of Different Words	Frequency				
		1	2 to 5	6 to 9	10 to 19	20 or more
Rational	546	183	161	43	53	106
Progressive	579	140	204	71	78	86
Beacon	630	164	252	76	60	78
Riverside	396	30	155	70	71	70
Gordon	383	79	123	62	75	44
Merrill	427	37	122	99	96	83
Aldine	157	10	18	16	28	85
Edson-Laing	427	65	138	80	81	63
Lippincott	377	82	67	68	78	82
Reading-Literature	209	6	53	47	45	58
Natural	436	49	154	69	80	84
Winston	308	53	111	53	51	40

Selke and Selke analyzed the vocabularies of the beginning books of twelve reading methods.[1] Table I shows the number and frequency of the different words introduced in each of these books. This table shows that certain books introduce several times as many as others, and that the amount of repetition in different books varies considerably. The Selke study shows also that few of these readers have more than one-third of their words in common with any other one of the twelve readers. For example, the Merrill and Edson-Laing contain 427 words each. Of the total 631 different words in these two books, only 223 or 35 per cent are common to both books. This is a relatively high percentage of similarity, because the median percentage of words common to two books is only 28.

In the vocabulary study made by Packer,[2] the words of ten first-year readers were tabulated. The following readers were included: Aldine, Beacon, Brooks, Carroll and Brooks, Cyr, Heath, New Education, New National, Riverside, and Wheeler. Packer found that 3,541 words were used in the ten readers. Of these words, 58 per cent occurred from 1 to 4 times; 3 per cent from 5 to 29 times; slightly over 8 per cent from 30 to 99 times; and only about 4 per cent from 100 to 5,250 times. The recurrences of over 75 per cent of the words in different readers are so infrequent that one cannot regard them as necessary words for the first grade. Since first readers seldom introduce more than 500 new words, a pupil who has mastered a given reader would find an average of over 300 new words in any other one of the nine readers. Upon the same basis,

[1] Selke, Erich and G. A. A Study of the Vocabularies of Beginning Books of Twelve Reading Methods. *Elementary School Journal*, XXII, 745–749. June, 1922.

[2] Packer, J. L. The Vocabularies of Ten First Readers. *National Society for the Study of Education, Twentieth Yearbook*, Part II, 127–144. 1921.

it can be said that a pupil who has mastered a given reader would find no need for nearly 200 of the words in his reading vocabulary.

When Packer's list is checked against Thorndike's list,[1] approximately one-third of the words which Packer found only once are in Thorndike's first thousand words. This means that even ten different first readers do not give enough drill upon the most important words to fix the bonds needed for those words. Of the words with frequencies of ten to twenty times in Packer's list, over one-third do not occur in Thorndike's first thousand. This means that some of the less important words are receiving drill which is unwarranted by the comprehensive Thorndike study. Of the 275 words with frequencies of fifty or more, nearly all are, however, in the first thousand of the Thorndike list.

These two aspects taken together point toward the probability that the ten readers taken as a whole were not planned with reference to the child's vocabulary needs. This is not an indictment of any one or two of the first readers. Of course the Thorndike list is, as its compiler points out, probably inadequate for the less frequently used words, but it is probably very exact for the first thousand words.[2] There is, consequently, justification for saying that if first readers vary from one another in their vocabularies, they should, so far as possible, stay within the thousand most important words.

An analysis of the vocabularies of ten second-year readers was reported in 1918 by E. T. Housh.[3] The following

[1] Thorndike, E. L. *The Teacher's Word Book*. Teachers College, Columbia University. 1921.

[2] Thorndike, E. L. Word Knowledge in the Elementary School. *Teachers College Record*, XXII, 334–370. September, 1921.

[3] Housh, E. T. Analysis of the Vocabularies of Ten Second-Year Readers. *National Society for the Study of Education, Seventeenth Yearbook*, Part I, 40–45. 1918.

readers were included in this study: method readers — Ward's Rational Method, Aldine, and Beacon; content readers — Riverside, Elson, Cyr, New Education, Baldwin and Bender, Heath, and Gordon. The frequencies of all the words contained in these readers were found; in his report Housh gives the frequencies of all words which occurred fourteen or more times and also appeared in each of the ten second readers. Of the sixteen words with the lowest frequencies reported, all except four are in Thorndike's first thousand.

The most serious matter disclosed by the Housh list, as in the Selke study, is the large number of words which occur only once, twice, or thrice in readers which contain them. Table II shows the data on this point. Over one-half the words contained in each of the ten readers occur only three times or less.

TABLE II

The Numbers of Words Occurring One, Two, or Three Times in Different Second-Year Readers

Frequency	Elson	Ward	B. & B.	Aldine	New Educ.	Gordon	Riverside	Cyr	Heath	Beacon
1	641	826	472	578	650	592	438	637	437	318
2	263	329	302	344	250	259	213	238	263	341
3	187	147	166	161	153	134	128	111	107	138

If any one of the method readers were used as a basal text, it would give drill on only 419 words common to all the content readers. Every content reader would contain more than that number of new words. The case is the same, therefore, for these second readers as for the readers upon which Packer reported. Table III shows, for example, the extent to which the vocabulary of the Ward Reader is

carried over into the vocabularies of the seven content readers. The vocabularies of the other two method readers, the Aldine and the Beacon, are carried over to almost exactly the same extent.

TABLE III

A Method Reader (Ward) Compared with Seven Content Readers as to the Number of Words Common to Each

	Ward	Cyr	Heath	Gordon	B. & B.	River-side	New Educ.	Elson
Total number of different words	1900	1198	1248	1387	1535	1457	1658	1910
Number of words common to all ten readers analyzed	419	419	419	419	419	419	419	419
Number of words in content readers not found in Ward		518	589	611	657	678	934	972
Number of words in content readers found also in Ward		680	695	775	878	779	724	928

The reading vocabularies of third-grade children have been analyzed with reference to the required textbooks for that grade in the state of Oregon.[1] In order to finish the third grade, pupils must read at least the following books:

Beacon Primer and First Reader
Natural Primer, First, Second, and Third Reader
Hamilton's Essentials of Arithmetic to page 124
The New World Speller to page 136

These books contain a total of 5,190 different words, of which 213 are found only in the speller. Only 5.8 per cent of the 5,190 occur fifty or more times, while 29.5 per cent occur but once.

[1] Gregory, C. A. The Reading Vocabularies of Third-Grade Children. *Journal of Educational Research*, VII, 127–131. February, 1923.

A still more extensive study of readers for the primary grades has been made by Kircher.[1] This study was based upon a tabulation of all the words contained in thirty-seven books — primers, first readers, and a spelling-book. In these books Kircher found approximately 5,000 different words. Like Packer and Housh, he found the vocabularies of different books very heterogeneous. These words were arranged with an indication of their frequencies in Kircher's list of books, their rating on the Thorndike list, their rating in Housh's study, and a combined rating. Upon these bases a set of graded vocabularies has been devised. The lists comprise 650 words.[2]

Thorndike's vocabulary study[3] is the most comprehensive of its kind. It was made for the purpose of finding an answer to the fundamental question, How many words does a pupil need for his reading? In order to obtain an answer to this question, an actual count of over 4,500,000 words was made. The words were selected as follows: "about 625,000 words from literature for children; about 3,000,000 words from the Bible and English classics; about 300,000 words from elementary-school textbooks; about 50,000 words from books about cooking, sewing, farming, the trades, and the like; about 90,000 words from the daily newspapers; and about 500,000 words from correspondence. Forty-one different sources were used."

The comprehensiveness of this study is further indicated by the list of forty-one sources which is given in *Teachers College Record*.[4] Among the sources are the following: ten chapters of *Black Beauty;* three chapters of *Little Women;*

[1] Manuscript in possession of H. W. Kircher, Superintendent of Schools, Sheboygan, Wisconsin.

[2] Obtainable from the Eau Claire Book and Stationery Company, Eau Claire, Wisconsin.

[3] Thorndike, *The Teacher's Word Book.*

[4] Thorndike, in *Teachers College Record, op. cit.*

Irving's *Sleepy Hollow;* one issue of the *Youth's Companion;* every word in thirty school readers, in two arithmetics, two geographies, and two histories; the vocabularies of twenty-five high-school texts in foreign languages; concordances of the Bible, Shakespeare, Wordsworth, Tennyson, Cowper, Pope, and Milton; the United States Constitution; the *Garden and Farm Almanac for 1914;* newspapers and private and business correspondence. From these varied sources Thorndike selected the 10,000 words which occurred most frequently. These 10,000 words constitute the list contained in *The Teacher's Word Book.*

The adequacy of the list has been computed upon the basis of the probable error in the placing of the words in the list. " The gist of it is that the present counts are adequate to determine the first one thousand words with a small probable error, and the next four thousand well enough for many educational purposes, and the last five thousand to an extent that is useful, though far from accurate. Of the words put in the first 500 of our list, about 25 words would, by an infinitely extensive count, be put lower. Of the words in the second 500, about 31 would be put in the next higher 500, and about 57 in the next lower 500. Of the words in the top 5,000, about 350 would be put lower. Of the words in the entire 10,000, about 1,000 would be displaced downward, and replaced by others from the 60,000 not listed here, but almost all of them would come in the next few thousands, so that it is not a serious error to regard them as belonging within the 10,000." [1]

The value of this word book lies chiefly in its use as an objective measure of the appropriateness of the vocabularies of school books. In so far as the sources are representative and adequate, this list of words enables school men to judge

[1] Thorndike, in *Teachers College Record, op. cit.*, pp. 348–350.

one of the fundamentals of content — the vocabulary. Additions will be made to the list, and the order of occurrences of the words will probably be changed. But until additional investigations are made, the choice of textbooks should be influenced by standards based upon this study.

Summary. This chapter shows the need for an extensive reading vocabulary. It shows also that six different bases can be employed in selecting the reading vocabulary: the subject matter, difficulty, phonetic drills, both difficulty and character of the subject matter, children's reading needs, and both difficulty and children's reading needs. The analyses of the vocabularies of school readers show that insufficient drill is provided for certain important words, and that different readers vary considerably in their vocabularies. The Thorndike word list now enables teachers to determine the basic reading vocabulary.

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CHAPTER III

INVESTIGATIONS OF THE RELATION BETWEEN THE METHODS OF READERS AND THEIR CONTENT

The variety of means for teaching reading as a cause for investigations. Whenever a great variety of means is used for the accomplishment of a purpose, investigators are likely to inquire into the relative merits of the different means. Such inquiries have been made in order to find out what kinds of materials are most suitable for the different methods of teaching reading. These inquiries have shown that there is a close relation between methods and means, although certain methods have been used with some materials which possess intrinsic merit and with other materials which are quite lacking in intrinsic merit.

Historical examples illustrate the relation between objectives and methods; close relation between methods and reading materials. Historical investigations have shown that at least one of the oldest methods of teaching reading was in many essential respects like one of the methods recently heralded as new. This method consists of teaching sentences which are subsequently analyzed. It was employed by Jewish teachers nearly two thousand years ago. This method assumes various forms in the hands of skillful teachers, but it is, almost without exception, used in connection with intrinsically valuable material.

The synthetic method of the Romans. In contrast with the analytic sentence method is the synthetic method which was used by the Romans. This method, which was still common within recent years, consisted of learning first the letters, then words, and finally groups of words as in sen-

tences. A great Roman teacher advised that children begin reading by means of informal lessons in which they might learn to recognize letters from blocks or tablets. Next, came the tracing of forms of letters. As soon as the names and forms of letters were mastered, all the syllables were learned. Then came the learning of words, and afterwards the learning of sentences. Forms of letters, names of letters, syllables, meaningless combinations of words, and then sentences! No one need marvel at the rareness of reading ability in those days. The marvel is that teachers have followed this child-quelling method until the present day. Indeed, an even more obdurate bar to progress was later formed and perpetrated upon children, because teachers came to believe that "You must spell before you can read." Teachers thus placed needless forms between the child and the meaning which he was later to glean from the page.

Making the content palatable. The content used in this dry-as-dust method was not always so unpalatable physically as it was mentally. Ingenious teachers as late as the nineteenth century employed methods which rivaled that of Atticus, the Greek, who presented his son with twenty-four slaves giving to each the name of one of the letters of the Greek alphabet. The ingenious teachers of modern times discovered that for threepence a week a child could be given a gingerbread letter for each letter that he recognized and named. This palatable method of learning to read was described as follows by Matthew Prior:[1]

To Master John the English maid
A horn-book gives of gingerbread

[1] "Alma," Canto II. Quoted from *The Historical Development of School Readers and Method in Teaching Reading*, by R. R. Reeder, p. 64.

And that the child may learn the better,
As he can name, he eats the letter,
Proceeding thus with vast delight
He spells and gnaws from left to right.

Among other ameliorative forms of content used by teachers were rhymes and pictures designed to make the names and sounds of letters more impressive. " The association between picture and letter was sometimes strengthened by the use of rime:

" A was an archer that shot at a frog.
B was a baker that had a big dog." [1]

The attractiveness of such rimes was sometimes enhanced by placing along the margins of pages pictures of the persons or things mentioned in the rimes. Pictorial representation was carried so far as to have in parallel columns the letters of the alphabet and pictures of the animals whose voices or cries most nearly resembled the sounds of the letters. Thus there were pictures " of a bleating sheep for *a*, of a lowing cow for *m*, a hissing serpent for *s*, and a buzzing insect for *z*." Another use of pictures consisted of presenting " an associated form which resembled the shape of the letters. Thus, *o* resembles the shape of a driver's lips when he says ' ho ! ' *w* resembles the crawling worm. The picture was used also in teaching phonetic combinations. Thus, a woman scaring chickens represented the German *sch* and the English *sh*." [2]

We are not to conclude, however, that all children had their path made smooth.

"The following is from an article in the *American Annals of Education and Instruction* for the year 1836, Vol. VI, pp. 226–227: 'When I attended school it would have been

[1] Reeder, *op. cit.*, pp. 66–67.
[2] Reeder, *op. cit.*, p. 66.

considered a crime to have looked into a book which contained engravings. I recollect of a boy having brought to school a copy of *The Three Hundred Animals*, but it was carefully concealed from the teacher and from most of the scholars through fear of punishment. We were so anxious, however, to see the novel figures it contained, the magnified pictures of the louse and the flea, the beehive, the peacock, the elephant and the whale — that we gave pins, marbles, and cherry-stones, gooseberries, and even half pennies to the proprietor for half an hour's perusal of it!'"[1]

Learning to read by not reading. Most of the devices described thus far were used during the centuries when children commonly spent from one to three years in mastering the simple mechanical elements of reading. The self-styled reading books or materials then used were really exercises in synthesis; children were required to learn mechanical fragments and then put the fragments together. The methods as avowed by their perpetrators and also evidenced by the content were skillfully designed for training pupils to interpret the printed page by symbolic content more artificial than printed words themselves. These materials, when designed for the primary grades, could not have been more wisely planned had the objectives been a distaste for reading and a fortification against the fundamental habits of reading. To the credit of children and teachers, be it therefore recorded that few children did acquire a taste for reading or overcome the defects which were instilled with such extreme pedagogical pains. On the contrary, the children learned their lessons!

Children might have survived intact had not the content and methods of advanced work in reading been fashioned after the unsuccessful grammar-translation method of Latin teachers.

[1] Reeder, *op. cit.*, pp. 67–68.

"Analysis seems to have played the leading rôle in all stages of the work. In Hofwyl's *Sketches* in 1832 is the following brief description of the current method of teaching reading: 'An excellent teacher, of thirty or forty years' experience, says that half a page is as much as his pupils can usually read to advantage in half an hour, although they are select pupils from ten to eighteen years of age. I am personally acquainted with several instructors of high reputation and long experience who pursue a similar course, only they carry it further. One of them often spends from twenty to thirty minutes on six or eight lines of common prose and without at all fatiguing his pupils. The pupils spell and define the words, tell their synonyms and opposites, write and paraphrase the sentence or paragraph; analyze and reduce it to its simplest sentences; analyze the words, parse the whole sentence or paragraph and recite the history, geography, biography, etc., to which there may be reference in the sentence.'" [1]

Thus were the content of reading courses kept at a minimum and interest in them practically extinguished for the majority of children.

A different approach to reading was provided by the word method. Although forms of the word method were used by a few teachers from the days of Comenius (1592–1670), no substantial progress in this method was made in America until Webb's analytical *Normal Readers* were published in 1865.

"The word-method was a great insight, and did more to relieve children from the torture of spelling book and primer than any other discovery of the century. But its advantage as a beginning-method was its weakness for later stages of the work. The word, as a whole, is the natural beginning, but analysis and synthesis must soon follow if the

[1] Reeder, *op. cit.*, p. 78.

child is to become independent in meeting new words. This weakness, or rather limitation, led many to hold more tenaciously than ever to the old alphabet-method, which, after all, did furnish the child a key, though a clumsy, illogical and mechanical one, by which he could unaided make out new words." [1]

Another outstanding fault of Webb's work, as well as that of Farnham,[2] who advocated the sentence method, was a lack of suitable content. The content used for both of these methods proved that words or even groups of words can be quite as uninteresting as the artificial forms of synthetic methods. This failure to provide suitable content for these methods supports our general view that content and method agree, because the adoption of these methods was not thoroughgoing. The notion that several years were required for "learning to read" still prevailed as it did in the minds of the Committee of Fifteen in 1895. So long as this notion prevailed, the teaching of reading had to be preceded by the teaching of the mechanical elements of which actual reading material is composed.

The reaction against the word and sentence methods developed sufficient strength within about a generation to bring forth one of the most extreme synthetic methods. This method, known as the Pollard, appeared in 1889.[3] Whatever of words had crept into the beginners' lessons was then expunged. Letters and groups of letters were studied and put together until pupils were equipped with "back door keys," "front door keys," "ladders," and "families." Even after this synthetic process, no work

[1] Reeder, *op. cit.*, p. 79.

[2] Farnham, G. L. *The Sentence Method of Teaching Reading.* Bardeen, 1887. (Farnham's advocacy of the sentence method began as early as 1873.)

[3] Pollard, R. S. *Manual of Synthetic Reading and Spelling.* American Book Company, 1889.

was permitted in reading until every word of the reading lesson had undergone dissection and a final reconstruction. Huey closes his critical evaluation of the Pollard method as follows:[1]

"Granting the care and completeness with which the method has been worked out, and the success which it has met in the 'mastery of word-structure and word-calling,' it must be pronounced intensely artificial and adult in its conceptions, and destructive of right habits of reading and of using language generally. The phonic elements are made to precede the word, the word is made to precede the idea, and the sentence comes last of all, just the opposite of the natural procedure. Besides, to burden the young pupil with the cumbersome technique of such a method and to so fill his mind with the dead products of adult analysis is a crime against childhood which cannot long be suffered. Even in perfectly attaining its ideal it has not taught the child to *read*, and is most likely to permanently unfit him for intelligent, natural reading."

A series of readers which combined many of the good features of other methods was developed by Ward in 1894.[2] This method, like its predecessors, required a year and a half for the learning of the mechanical elements of reading. As the author of this successful series says:

"The special purpose of the Primer and the first two Readers in this series is to put the child, within a year and a half from his entrance into school, into possession of a complete *key* to English Reading; so that, should his schooling then cease, his ability to read would nevertheless 'grow with his growth and strengthen with his strength.' The

[1] Huey, E. B. *The Psychology and Pedagogy of Reading.* Reprinted by permission of The Macmillan Company, 1908. Pp. 283–284.

[2] Ward, E. G. *The Rational Method in Reading.* Silver, Burdett and Company, 1894. Preface.

method here introduced is a combination of the word (or sentence) method and the phonetic method." [1]

So long as texts for training pupils to read were " keys " to actual reading, the course in reading was unlikely to utilize interesting content. Instead of providing interesting content along with mechanical drills, the texts emphasized mechanical drills and neglected content. Samples drawn from the Ward primer illustrate the care with which provisions were made for mechanics. By the time that ten pages had been mastered, the child was able to read these lines:

I see the dog.
Does the dog see me?
Dog Jack does see you.
Look at me well, dog.
The dog looks at me.
Does the dog see?
The dog sees me well.[2]

Another ten pages of " keys " unlock the following:

The girl is not like the dog.
She is like me. She looks like me.
Are the boy and girl well? [3]

After twenty pages more, these sentences are unlocked.

Is the boy ail ing?
He is not. He is well. It is the girl that is ail ing.
What ails her?
She goes for milk too much.

To the end of the primer the content illustrates an attempt to develop mechanically the " keys " that are some-

[1] Ward, E. G. *The Rational Method in Reading*, Primer, p. 3.
[2] Ward, *op. cit.*, p. 15.
[3] *Ibid.*, p. 25.

time to unlock worth while material. The case of the word *but* is a good illustration of this point. On page 116, the child reads:

The ram did not but/ Ŏt/tō. But Ŏt/tō could not take all the corn.

On page 117 the drill continues:

Mr. But ler is a farm er. He has good but ter for sāl/.

Later, on page 119, we read:

Who is this? This is Mr. Prat/. He is at work making but/⁄ns. Did you say but/er? No, I said but/⁄ns.

These quotations are submitted solely for the purpose of illustrating the mechanical content that persisted throughout the A B C method, the extreme phonetic "synthetic" methods, and even during the earlier use of the sentence method.

A few more illustrations of a different kind show the difficulty with which age-long habits are overcome. There was, during the last decade of the nineteenth century, a pronounced tendency in the direction of wholesome changes in both the method and the content of reading courses. At that time, however, theory often ran far ahead of practice. McManis writes:

"It is an interesting fact that in many of the written courses of study, the statement of aims and methods was quite at variance with the textbooks used. For example, the Indiana state course of study of 1897 outlined a method in which 'we shall have no senseless word calling,' but in the first reader text used by the schools of the state at that time, three words, *hat*, *girl*, *doll*, arranged in various ways, made up the first lesson. The second lesson added three more words, *the*, *a*, and *and;* which, added to the others,

were again arranged in a multitude of ways. In the third lesson *Nat, has, hen,* made their appearance. The course of study prescribed the first fourteen lessons of this type to be *mastered* during the first third of the first grade. Such a contradiction between claims of courses of study and actual material put into the hands of teachers and pupils shows the tardiness with which book makers and publishers have taken up the better ideas of the profession." [1]

The disparity between theory and practice is shown likewise in the course of study for Kansas schools in 1895:

"Emphasis in the lower grades upon folklore, fairy tales, and nature 'myths' was a prominent feature. In the upper grades great stress was placed on literary masterpieces such as *Evangeline, Tales from Shakespeare, Enoch Arden, Gettysburg Speech, Lady of the Lake.* The committee that planned this course of study acknowledges the influence of McMurry in providing the literary 'wholes' for the grades. Reading was taught in the usual mechanical way, in spite of this ambitious program of literature for the grades. The word and sentence methods were recommended. During the first month in the first grade fifteen words were to be taught on the board. Spelling and phonic drills continued from the very first. After three months of drill on words and sounds the reader was introduced. In the second, third, fourth, and fifth grades emphasis was placed on sound and spelling. . . . Children were taught to mark the words as they learned them and word analysis was gradually introduced." [2]

Learning to read by reading. The tendency indicated in the quotations from Professor McManis was clearly toward meaningful content for reading classes. Over a

[1] McManis, J. T. History of Reading in the Elementary School, 1875–1900. *Educational Bi-Monthly*, XI, p. 343. April, 1917.

[2] McManis, *op. cit.*, 344–345. Professor McManis refers here to the report of the Superintendent of Public Instruction for 1895–1896.

decade passed, however, before such content permeated the barren waste of primary reading. Then followed a sharp change. Authors of readers began to proclaim their belief in the use of worth while childlore from the first lessons. Even the month or two of " pre-primer work " was given in conjunction with interesting content. One manual, published in 1909, set up in the following terms its criteria for primary reading:

"Does the method from the start train in power to grasp not a word but a related set of words, a sentence, an entire situation? Does the method proceed from whole to parts and back again to clearer wholes? Does it advance from a unit of thought, a sentence, to the words as words without loss of the relationship among the words? Is a flow of association maintained among the words as parts of the original whole from which they have been disentangled, or as parts of a different whole created anew out of the same words set in other relations?" [1]

In exemplifying these principles, the primer contains basal stories interspersed with supplementary stories.

The *Free and Treadwell Primer*, which was published in 1910, contains the following statement in its preface:

"For years the most progressive educators have been urging that only good literature should be used in school readers. Some authors of primers have thought it impossible to provide such material within the vocabulary that beginners can learn with ease. Others have used a little real literature with a large amount of unrelated and uninteresting material specially prepared for the sake of the word repetition and phonic drill.

[1] *Progressive Road to Reading; Plan of Work.* Silver, Burdett and Company, 1909. P. v.

"Experience proves that all children are interested in and enjoy the simple folk tales, which are the literary products of many minds and have survived the centuries, because they represent certain universal human experiences and satisfy certain common needs of childhood. Through countless repetitions, from one generation to another, they have assumed a form marked by simplicity and a unique literary charm." [1]

The nine stories which make up the primer are in keeping with the prefatory statement.

The recent agitation in favor of silent reading has led to the development of plans in which there is an attempt to treat children in reading classes as though they had actual lives to live. For example, the content used by Miss Watkins is drawn chiefly from the daily experiences of children.[2] There is a "personal history" lesson in which children learn to read the following words: *name*, *school*, *grade*, *age*, *teacher*, *city or township*, *father's name*, *telephone number*, etc. Also there is a "things in the room" lesson in which children learn to read such words as *cupboard*, *table*, *swing*, *flag*, *Victrola*, *plants*, etc. This work is facilitated by skillfully devised plans which include sentence-completion tests, phonics, drill games, and directions for regular school work. In the preface to Miss Watkins' book, Dr. Horn states that this work is not intended to supplant the reading content available in primers and first readers. The variety of content used in these lessons is shown by the list of nearly 500 words, phrases, and sentences developed during the first year of reading (the total number of words is greatly in excess of 500). Content of similar character is used

[1] Treadwell, H. T., and Free, M. *Reading-Literature*, Primer. Row, Peterson and Company, 1910. Preface.

[2] Watkins, E. *How to Teach Silent Reading to Beginners*. Lippincott, 1922.

in beginning classes in Detroit under the direction of Courtis.[1]

So far as content for beginners is concerned, our discussion has taken us over the long period of time during which children were introduced to the art of reading by very tedious, roundabout methods and content; from the times in which children spent several years in the mastery of enough mechanical content to enable them to read at all, to modern times when they begin the mechanics of reading by contact with materials which are designed not only to teach mechanics but also to give literary satisfaction. So long as drill upon mechanics was emphasized, the content of reading consisted of the mechanical elements; since actual reading has been emphasized, the content of reading has been engaging and satisfying.

Can silent and oral reading be taught by the use of the same content? The content of the later books of most series of readers exemplifies the plan of using the reading course for oral reading. In compliance with this plan of treatment, such selections as speeches of Patrick Henry and the Webster-Hayne debate have been used alongside the many poems with which reading texts have been generously supplied. Although reading books have been criticized adversely for containing material which is especially suitable for the purpose of oral reading, investigators have not analyzed the content of these books with a view to showing the possibilities of using the same material for silent reading. In fact, we have had few explanations which show why reading material which is suitable for oral reading is not also suitable for silent reading.

Among the strongest of the protests against using literary

[1] Heller, R. R., and Courtis, S. A. Exercises Developed at Detroit for Making Reading Function. *National Society for the Study of Education, Twentieth Yearbook*, Part II, pp. 153–161. 1921.

selections for silent reading are, however, those from persons who are particularly interested in having literary selections read. The reasons for this protest grow out of the fact that silent reading lessons are conceived of as means for developing the technique of reading. Accordingly, it is maintained that silent reading lessons, if effective, must resort to special methods of drill. This, in turn, is held to mean that if literary content is used for silent reading lessons, there will be a destruction of the literary appeal by the methods necessarily employed in silent reading drill. The conclusion of the whole matter is that the most desirable material for silent reading lessons is that which cannot be injured even if it is used for purposes of drill. In accordance with this view, literary material can be used *after* pupils have learned to read, but methods of reading and matters of drill should be omitted from those periods in which literary content is used.[1] This view does not preclude the use of easy literary material for practice in rapid silent reading.

A similar protest arises from Professor Horn, who also believes that literary material is not well adapted for use in most silent reading lessons. This protest grows out of a consideration of the values of silent reading drill in terms of speed, accuracy, comprehension, organization, and reproduction. Literary material is, Horn says, inappropriate because of the difficulty of measuring attainment in terms of the objectives which he advocates. He advises, therefore, a freer use of content which is more amenable to drills, tests, repetition, and reproduction.[2]

Obviously, the disciplinary effects of thus using one type of content to train children to read a different type of con-

[1] Leonard, S. A. *Essential Principles of Teaching Reading and Literature.* Lippincott, 1922. Pp. 138 ff.

[2] Horn, Ernest. A Constructive Program in Silent Reading. *Journal of Educational Research,* III, 336–344. May, 1921.

tent can be determined by measuring the progress of different groups of pupils who, for their reading content have studied different proportions of literary material. Such a test might show that certain kinds of literary content are unsuitable for silent reading lessons, but that other kinds are quite as appropriate as factual material. Indeed, such stories as *The Bell of Atri* and *The Real Princess* may be particularly suitable for silent reading if the methods of teaching them are appropriate. At any rate, some readers which are especially designed for use as silent readers are now including certain literary selections and suggesting methods which are designed to facilitate the silent reading of such selections.[1] So long as reading texts are used by some teachers for the two purposes of cultivating reading ability and developing literary taste, both literary and factual selections will probably find a place in the texts. Meanwhile, tests should be made to determine accurately the effects of various kinds of treatment of both literary and factual material.

An investigation of specific reading habits. In order to show that reading abilities may not be general, or automatically transferred from use in one field to another, Miss Wilson's investigation is summarized.[2] The results of this investigation indicate that the current practice of teaching pupils to read poetry and narrative materials does not automatically train them adequately to read other forms of content. One may ask, therefore, whether, by training pupils to read factual content, they would be taught to read poetry and narrative materials effectively. Miss Wilson tested approximately 900 pupils of Cincinnati schools.

[1] Davidson, I., and Anderson, C. J. *The Lincoln Readers*, Third Reader. Laurel Book Company, 1922.

[2] Wilson, Estaline. Specific Teaching of Silent Reading. *Elementary School Journal*, XXII, 140–146. October, 1921.

Her tests consisted of material in arithmetic, civics, grammar, geography, poetry, and narration.

Throughout, the results show that the ability to read arithmetic was inferior to the ability to read narrative material. Table IV shows that even in the case of individuals there were wide variations in the abilities to read different kinds of material. One pupil, for example, attained a score of 100 in grammar and only 30 in geography and only 33 in poetry. Another received 16 in arithmetic and 100 in civics. Even greater differences can be found in the case of other pupils.

"The variation in scores is doubtless due to the lack of specific training which would make the reading of arithmetic as easy as the reading of a narrative. The failure to answer the questions relative to the reading of the arithmetic was not because of any arithmetical calculations or reasoning involved, the questions being mere fact questions. The only question requiring any knowledge of a principle of arithmetic was No. 6, and this appeared in the individual scores to be less often missed than the others.

"In the case of informational and narrative material there has been rather specialized practice in doing just this sort of reading. The pupils are trained to read and to answer questions relative to subject-matter of this type. Even poetry, with its obscure sentence structure and less familiar vocabulary, does not present the difficulties encountered in arithmetic and grammar. Why? Probably because modern textbooks and teachers have developed a technique of getting the meaning of poetry.

"The question arises at once as to the relative difficulty of different kinds of subject-matter. Obviously the various selections are not equally difficult, but this is probably because of the lack of specifically trained reading habits. It remains to develop reading techniques suitable to these diversified kinds of material before any conclusive weight-

ing of sentences can be made. Yet these are exactly the kinds of reading that are considered to be of equal difficulty. The grammar test is typical of the instruction that textbooks assume to be meaningful to pupils, *i.e.*, select nouns, underline predicates, inclose in quotation marks, etc. The difficulty is one of understanding and following directions, a specific kind of comprehension evidently requiring special training."

TABLE IV

Records of Individuals in Tests on Different Types of Subject Matter [1]

	Arithmetic	Civics	Grammar	Geography	Poetry	Narrative
Riverside School						
William . .	8	100	50	80	33	—
Jack	91	100	33	90	83	—
Lillian . . .	16	100	66		66	—
Evelyn . . .	33	90	50	70	100	—
Ella	75	55	100	30	33	—
Dyer School						
John	75	—	—	100	33	50
Sam	75	—	—	70	$16\frac{2}{3}$	50
Wilbert . . .	$16\frac{2}{3}$	—	—	40	100	75
Walter . . .	$83\frac{1}{3}$	—	—	90	33	75
Chase School						
Bertha . . .	58	100	0	100	100	—
Roberta . .	75	100	$66\frac{2}{3}$	100	50	—
Westwood School						
Sylvan . . .	8	—	100	50	100	100
Stewart . . .	$16\frac{2}{3}$	—	100	40	100	100
Gordon . . .	25	—	0	80	$66\frac{2}{3}$	100

Had Miss Wilson's results been based upon standardized conditions, the plain conclusion would be that, in order to have silent reading ability of any given sort, a pupil would

[1] Wilson, *op. cit.*, p. 146.

require training especially appropriate therefor. This conclusion, if supported, would indicate that training in the reading of poetry, narration, and informational material should be supplemented by additional specific training in the reading of grammar and arithmetic. In other words, if additional data should support Miss Wilson's tentative findings, none of the forms of content now contained in readers could safely be given up; instead, a greater variety of content and specific methods of teaching each of the specific forms of content would be required.

Summary. Reading has been taught by means of many devices and forms of subject-matter. There has been a close relation between the methods of teaching and the content of courses in reading. Many of the older methods were very successful in the teaching of the mechanics of reading. They employed the formula, *Learning to read by not reading.* This formula has recently given way to the formula, *Learning to read by reading.* Recent investigations indicate that schools must not only teach reading by having pupils read but that schools must also provide practice in the reading of materials designed especially to cultivate specific reading habits. Specific results come from specific teaching. Specific teaching requires the use of specific materials. Since there are many specific types of material, there must be a miscellany of materials in the reading course.

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CHAPTER IV

THE GRADING OF CONTENT FOR READING

The claims of school readers as to grading. An editor of a school book publishing company recently examined the prefatory statements of a large number of school readers. He found in the prefaces of many of the books the statement that the selections contained therein were carefully graded as to difficulty. Later, upon examining the content of different series of "well-graded" readers this editor discovered great discrepancies. He found that certain selections were placed in different books for any one of several grades. Obviously, these selections were not carefully placed, or else the bases for judging difficulty varied.

The grading of materials used in city courses of study. In 1913 an investigation was undertaken for the purpose of ascertaining what readings were used in the elementary schools of the United States and in what grades they were studied.[1] This investigation was conducted by examining the printed courses of study of thirty-six cities and fourteen states. The results of this investigation were believed by its authors to "approximate the results which would be obtained were it possible to know what is being done in every city and state."[2]

This investigation disclosed wide variations in the placement of selections and books. Rarely was a popular title found in lists for one grade only. A few titles were found

[1] Bobbitt, J. F., Boyce, A. C., and Perkins, M. L. Literature in the Elementary School Curriculum. *Elementary School Teacher*, XIV, 158–166. December, 1913.

[2] Bobbitt, Boyce, and Perkins, *op. cit.*, p. 159.

in all eight grades of the elementary school. These titles refer, however, to selections or books which are abridged and simplified for the lower grades.

The findings of this investigation are similar to those of the editor mentioned above — if the printed courses were all well graded, the bases for grading must have been different. It may be granted that certain books, as the *Arabian Nights* collection, can yield material which is suitable for any one of several grades. It may be granted further that the story of *Black Beauty* can be told either in words of one syllable or in good English. Even so, it seems that there should be a grade or perhaps two or three grades within which selections can most profitably be introduced to children. There seems to be no good reason why a selection should be garbled by some one with a mania for simplification, if it can be profitably read in a later grade in its original form. Twenty-five years ago, relatively few attractive selections were available for the primary grades; that situation has changed. Why not abandon the makeshift method of transforming selections wholesale for use throughout the elementary school?

Table V shows, however, that the possession of simplified content is not the sole excuse for the range of occurrences of certain books. The same editions of certain books are used in many grades. In this table the grade in which each book is most desirable was found by taking the grade which "lay nearest the majority practice, as shown by the entire array of recommendations." The "range of grades" shows the variations among the printed courses for each book. The books by Carpenter, Church, and Dopp may, of course, be used for different purposes and with different methods. The average range of grades for which these books are recommended is four. Such a range of grades is probably unwarranted.

TABLE V

Partial List of Materials in Use in Elementary Schools in 1913[1]
(Data compiled from printed courses of study)

Author	Title	Times Recommended in Printed Courses	Grade Most Desirable	Range of Grades
Carpenter	Africa	7	6	4–7
	Asia	9	5	4–7
	Australia	7	6	4–7
	Europe	9	6	4–7
	How We Are Clothed	5	6	4–8
	How We Are Fed	6	8	4–8
	North America	9	5	4–6
	South America	7	6	4–7
Carroll	Alice in Wonderland	27	4	3–7
	Through the Looking Glass	9	5	4–7
Carter	Story of Brave Dogs	5	4	3–5
Church	Story of the Iliad	8	5	4–8
	Story of the Odyssey	9	5	3–8
Clarke	Story of Ulysses	9	5	3–6
	Story of Troy	4	5	4–6
Clemens	The Prince and the Pauper	10	7	5–8
	Tom Sawyer	6	7	6–8
Collodi	Pinocchio	9	4	1–7
Cooke	Nature Myths and Stories	5	2	1–3
Coolidge	How the Leaves Came Down	4	2	2–3
Cooper	Deerslayer	7	7	5–7
	Last of the Mohicans	17	7	6–8
	The Spy	13	7	6–8
Craik (Mulock)	Adventures of a Brownie	21	4	2–6
	Little Lame Prince	17	3	2–6
Craik	Bow-wow and Mew-mew	6	2	1–2
Dana	Two Years Before the Mast	11	7	6–8
Defoe	Robinson Crusoe	29	4	1–7
Dickens	Christmas Carol	25	7	3–8
	Cricket on the Hearth	14	8	6–8
	David Copperfield	11	7	5–8
Dodge	Donald and Dorothy	5	5	3–7
	Hans Brinker	19	6	4–8
Dopp	Early Cave Men	8	3	1–6
	Tree Dwellers	7	3	1–6

[1] Bobbitt, Boyce, and Perkins, *op. cit.*, pp. 160–161.

The relation of the placement of material to the academic standards of schools. The degree to which a disparity in placement is justifiable upon the basis of differences among schools is indicated by a more recent investigation.[1] In obtaining the data for this investigation, selections were presented to pupils of Grades III to VIII, as indicated in Table VI.

TABLE VI

The Selections Which Were Presented to Pupils, and the Grades in Which the Pupils Read Them
(Grades in which used are checked [√])

Selections	III	IV	V	VI	VII	VIII
The Leak in the Dike	√	√	√			
Excelsior	√	√	√	√	√	√
Phaëthon	√	√	√			
The Village Blacksmith	√	√	√	√		
The Ugly Duckling	√	√	√			
The Barefoot Boy		√	√	√	√	√
Dick Whittington and His Cat	√	√	√	√		
Abou Ben Adhem			√	√	√	√
Cosette	√	√	√			
The Wreck of the Hesperus	√	√	√	√	√	
Aladdin and His Wonderful Lamp	√	√	√	√	√	
Paul Revere's Ride	√	√	√	√	√	√
The Wonderful One-Hoss Shay				√	√	√
The Gettysburg Address				√	√	√
The Chambered Nautilus				√	√	√
Douglas and Randolph			√	√	√	√
Baron Munchausen Tales			√	√	√	√
Marco Bozzaris				√	√	√
Christmas at the Cratchits'		√	√	√	√	√
What Constitutes a State				√	√	√

[1] Uhl, W. L. *Scientific Determination of the Content of the Elementary School Course in Reading.* University of Wisconsin, 1921.

The pupils of four different schools were asked to read the selections, state whether or not they liked them and why, and answer questions based upon the selections. The four schools which participated were selected because of the differences in the types of pupils attending them. One is the University of Chicago Elementary School (School U); the other three are public schools in Evanston, Illinois (Schools A, B, and C). Table VII shows the number and distribution of pupils who participated. The Evanston schools are located in three very different neighborhoods, and may be classified fairly accurately as follows: School A, attended by pupils of the middle class; School B, by pupils having access to home libraries, opportunities for wholesome recreation, and ample financial means; and School C, by pupils of the poorer classes, with many foreigners and negroes recently from the South. Pupils of Grades I and II did not participate in this investigation because of their inability to write their reactions. References to the schools throughout this discussion will be made by letter as just designated.

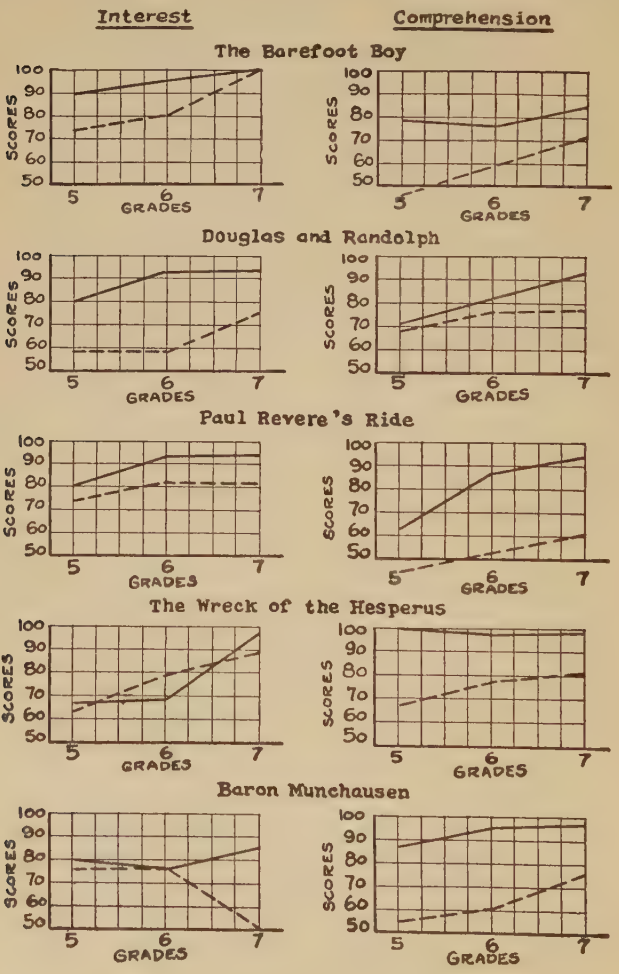
TABLE VII

The Distribution of Pupils in the Four Schools Which Coöperated in the Study of Reading Material

Schools		Number of Pupils per Grade						
Grades		III	IV	V	VI	VII	VIII	Total
Evanston Public . .	A	56	42			44	73	215
	B	18	32					50
	C	18	36	38	37	26	17	172
University of Chicago Elementary School	U			30	28	34		92
Total for all grades . .		92	110	68	65	104	90	529

DIAGRAM I

Comparison of interest in and comprehension of certain selections as shown by the responses of pupils of different schools. (———— equals School U; ---------- equals School C.)



The selections presented to the 529 pupils were chosen because of their use in many cities, the variety of appeals to children as stated by teachers, and their common use in more than one grade. In order to provide a uniform appearance of these representative selections, they were printed in a seventy-page booklet. With the exception of the selection entitled *Douglas and Randolph*, the prose selections were re-adapted especially for this use. In making these adaptations, the different versions were carefully studied to enable the writer to render the selections in a form closely similar to the versions found in the standard readers. Before presenting these selections to the pupils, the teachers were consulted and told the nature of the problem and of the work already done. It was explained that a sufficient number of teachers' judgments had been obtained, and that at this time only pupils' judgments were desired.

The comprehension questions elicited responses which show pronounced differences between pupils of the different schools. In Diagram I the differences between the qualities of the responses for Schools U and C are shown for selections read in three different grades. This diagram shows the percentages of pupils who profess interest in the selections designated and the percentages of questions correctly answered. In comprehension the pupils of one school are at least two grades behind those of the other. Only in the case of *Douglas and Randolph* do the seventh-grade pupils of School C reach the comprehension scores attained by the fifth-grade pupils of School U. The diagram thus shows a marked variability in the grading of the pupils of two schools. It is, however, quite unnecessary to go outside a single school system to find great differences between schools. Indeed, the differences between the two schools of the same system represented in Diagram II are as marked

as those between schools of different systems. In only one case, that of the very easy selection entitled *The Ugly Duckling*, do the fourth-grade pupils of School C comprehend reading material as well as the third-grade pupils of School B. In their comprehension of each of the other selections the two schools remain about two grades apart.

When different schools vary in comprehension so that the pupils classified in a given grade are consistently two or more grades apart in comprehension, radical measures should be taken to insure either a flexible grading of material or an improvement of teaching or both. Such variations as these justify in part the flexibility indicated by the range of grades in Table VIII, although those variations represent variations between different school systems. Probably ranges of two or three grades are desirable within each school system; certainly this is true in cities with different population groups attending different school buildings.

Dependence of the success of material upon the grade in which it is used. In order to obtain data upon reading selections from a representative number of experienced teachers, the author has obtained the judgments of approximately three thousand elementary school teachers of Grades I to VIII. These teachers were asked first to name the most desirable and the most undesirable selections in their basal readers. Twenty-two hundred and fifty-three teachers responded to this request. Next, a request was sent to the same cities for the judgments of teachers upon about fifty representative selections for their respective grades. To this request 741 teachers responded.[1]

In the first of these questionnaires, the teachers were at liberty to name any selections in their readers as examples

[1] See Uhl, *op. cit.*, Chap. II, for a description of the method followed in this investigation.

DIAGRAM II

Comparison of interest in and comprehension of certain selections as shown by the responses of pupils of two schools within the same school system. (———— equals School B; - - - - - - - - - - - - equals School C.)

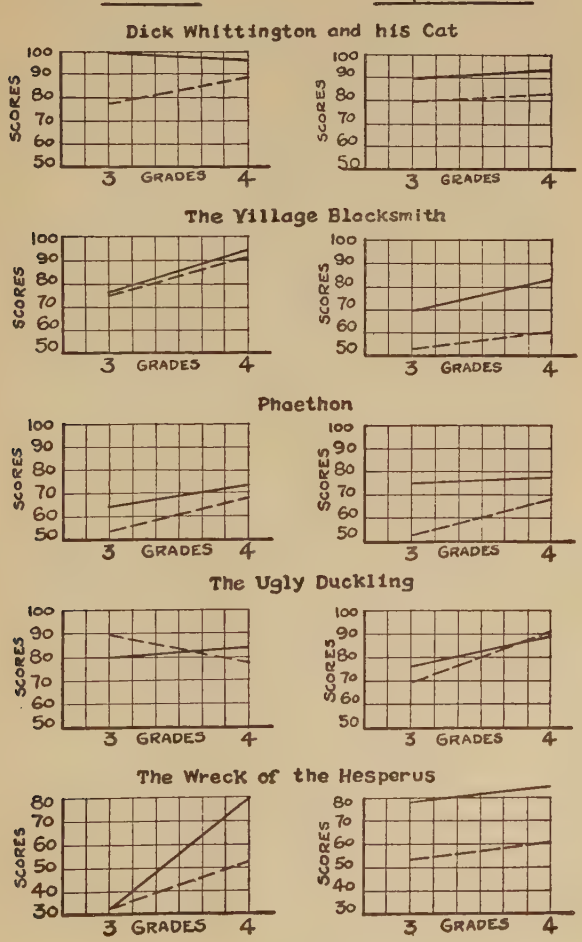


TABLE VIII

Teachers' Reactions Regarding the Placement of Selections

(The percentages of favorable responses are based on the number of teachers responding for each of the grades)

Selections	Questionnaire	Grades in Which Judged and Percentages of Responses Favorable							
		I	II	III	IV	V	VI	VII	VIII
Sleeping Beauty	I	—	67	82	62	—	—	—	—
	II	81	96	99	—	—	—	—	—
I Saw a Ship a-Sailing	II	85	97	86	—	—	—	—	—
Lambkin	I	—	98	—	—	—	—	—	—
	II	91	98	85	—	—	—	—	—
The Pied Piper of Hamelin	I	—	94	—	96	79	94	100	—
	II	—	88	97	97	97	94	90	88
Robinson Crusoe	I	—	97	100	92	90	86	—	—
	II	—	79	96	92	93	93	—	—
The Sandpiper	I	—	—	100	33	80	—	—	—
	II	—	—	48	85	94	90	—	—
Cricket on the Hearth	II	—	—	55	41	66	62	93	—
Rip Van Winkle	I	—	—	—	100	60	92	100	93
	II	—	—	67	75	82	94	100	98
The Great Stone Face	I	—	—	—	0	40	78	87	88
	II	—	—	—	21	57	74	87	96
The Snow Image	I	—	—	—	36	—	33	—	—
	II	—	—	—	64	—	80	75	84
Horatius at the Bridge	I	—	—	—	80	92	90	92	100
	II	—	—	—	94	86	88	96	98
Lochinvar	II	—	—	—	—	68	83	94	98
The Legend of Sleepy Hollow	I	—	—	—	—	93	90	95	85
	II	—	—	—	—	66	77	94	100
The Skeleton in Armor	I	—	—	—	—	13	—	27	50
	II	—	—	—	—	58	—	80	92
Elegy (Gray)	I	—	—	—	—	—	11	—	53
	II	—	—	—	—	—	18	51	44
The Vision of Sir Launfal	I	—	—	—	—	—	—	48	72
	II	—	—	—	—	—	57	—	91
Thanatopsis	I	—	—	—	—	—	—	14	14
	II	—	—	—	—	—	—	36	57
The Prisoner of Chillon	I	—	—	—	—	—	—	100	—
	II	—	—	—	—	—	36	46	58
The Man Without a Country	I	—	—	—	—	88	—	100	100
	II	—	—	—	—	63	53	93	97

of good or poor material. Nevertheless, agreement between the responses from different cities was striking. As soon as the responses from teachers of different grades were compared, however, it was found that many selections recurred in several different grades. The degree of favor with which these selections were rated often depended upon the grade in which they had been used. In order to verify and intensify these judgments, the lists of titles submitted in the second questionnaire were allowed to overlap somewhat from grade to grade. That is, there was an attempt to get judgments on representative selections below the point of their greatest value and above the grade in which they are best introduced. For example, teachers of Grades III to VIII were asked to judge the success of *Rip Van Winkle* in their respective grades. Data on the placement of selections were obtained also from children who read the selections catalogued in Table VI. In this portion of the investigation there was an attempt to have selections read by grades both above and below the grades most appropriate for their use.

Tables VIII and IX show the percentages of teachers and pupils who rated these representative selections favorably for each grade in which the selections were judged. As will be seen, some selections recur in many grades. *The Pied Piper of Hamelin*, for instance, in prose or verse, occurs in Grades II to VII as shown by the first questionnaire. Other selections, as *The Ugly Duckling* and *The Village Blacksmith*, recur from grade to grade even within the same city course of study until pupils tire of them. The responses show that children often re-read certain selections instead of extending their acquaintance with other selections or books.

Selections which gain in favor from grade to grade. Another matter shown by Tables VIII and IX is that many

TABLE IX

Teachers' and Pupils' Reactions Regarding the Placement of the Selections Presented to Pupils

(The percentages of favorable responses are based on the numbers of teachers or pupils judging the selections in the different grades.)

Selections	Questionnaire or Pupils	Grades in Which Judged and Percentages of Responses Favorable							
		I	II	III	IV	V	VI	VII	VIII
The Leak in the Dike	QI	—	—	—	100	100	—	—	—
	QII	—	—	100	99	99	—	—	—
	Pupils	—	—	97	96	99	—	—	—
Excelsior	QI	—	—	—	0	0	—	—	—
	QII	—	—	—	38	60	—	88	—
	Pupils	—	—	39	37	38	47	69	66
Phaëthon	QI	—	0	25	—	—	—	—	—
	QII	—	79	86	97	97	—	—	—
	Pupils	—	—	65	61	67	—	—	—
The Village Blacksmith	QI	—	—	—	100	100	—	—	—
	QII	—	64	80	94	97	94	80	81
	Pupils	—	—	88	91	97	97	—	—
The Ugly Duckling .	QI	—	—	62	69	—	—	—	—
	QII	—	90	91	83	—	—	—	—
	Pupils	—	—	90	85	85	—	—	—
The Barefoot Boy .	QI	—	—	20	86	—	91	—	—
	QII	—	—	69	75	94	96	91	93
	Pupils	—	—	—	68	81	87	100	99
Dick Whittington and His Cat . .	QI	—	100	100	92	—	—	—	—
	QII	71	87	97	99	—	—	—	—
	Pupils	—	—	89	91	88	84	—	—
Abou Ben Adhem .	QII	—	—	—	63	89	—	—	—
	Pupils	—	—	—	—	52	53	55	55
Cosette	QI	—	—	—	—	94	90	—	—
	QII	—	—	—	—	66	—	—	—
	Pupils	—	—	75	80	90	—	—	—
The Wreck of the Hesperus . . .	QII	—	—	31	—	—	—	—	—
	Pupils	—	—	52	66	71	74	85	78

TABLE IX—*Continued*

Selections	Questionnaire or Pupils	Grades in Which Judged and Percentages of Responses Favorable							
		I	II	III	IV	V	VI	VII	VIII
Aladdin and His Wonderful Lamp	QI	60	—	100	93	90	—	—	—
	QII	68	79	95	97	98	—	—	—
	Pupils	—	—	86	87	93	84	81	—
Paul Revere's Ride	QI	—	—	—	92	—	—	—	—
	QII	—	—	77	83	—	97	96	95
	Pupils	—	—	—	64	76	92	94	100
The One-Hoss Shay	QI	—	—	—	—	100	—	—	100
	QII	—	—	—	—	91	94	100	98
	Pupils	—	—	—	—		67	76	82
The Gettysburg Address	QI	—	—	—	0	—	—	—	—
	QII	—	—	—	—	—	72	92	100
	Pupils	—	—	—	—	—	81	82	82
The Chambered Nautilus	QI	—	—	—	—	—	—	18	88
	QII	—	—	—	—	30	—	83	93
	Pupils	—	—	—	—	—	31	34	34
Douglas and Randolph	QI	—	—	—	—	0	—	72	—
	QII	—	—	—	—	—	—	88	—
	Pupils	—	—	—	—	59	70	89	98
Baron Munchausen Tales	QI	—	—	—	—	0	—	—	—
	QII	—	—	—	54	70	69	74	—
	Pupils	—	—	—	—	78	76	84	84
Marco Bozzaris	QI	—	—	—	—	—	—	100	—
	QII	—	—	—	—	—	—	84	97
	Pupils	—	—	—	81	84	84	86	90
Christmas at the Cratchits'	QI	—	—	—	100	86	97	97	—
	QII	—	—	—	73	92	90	99	98
	Pupils	—	—	—	81	84	84	86	90
What Constitutes a State	QI	—	—	—	—	—	—	0	—
	QII	—	—	—	—	—	—	74	97
	Pupils	—	—	—	—	—	31	44	55

selections gain in favor in later grades. In the cases of selections written in many versions of varying difficulty, we can draw only general conclusions. Among such selections *Aladdin* is increasingly popular from Grades III to V; this fact may be due to either or both of two reasons;

TABLE X

A List of Selections Which Gain in Favor from Grade to Grade

(The percentages were derived by dividing the total number of teachers who reported upon the respective selections by the number of teachers who reported favorably upon the same selections)

Selections	The Gain in Favor from Grade to Grade as Measured by the Percentage of Favorable Reports from Teachers upon the Selections
Aladdin . . .	rises from 68% in Grade I to 98% in Grade V
Dick Whittington	rises from 77% in Grade I to 99% in Grade IV
Sleeping Beauty .	rises from 81% in Grade I to 99% in Grade III
Phaethon . . .	rises from 79% in Grade II to 97% in Grade IV
Robinson Crusoe	rises from 79% in Grade II to 93% in Grade VI
The Sandpiper .	rises from 48% in Grade III to 95% in Grade VII
The Cricket on the Hearth . .	rises from 55% in Grade III to 93% in Grade VIII
Rip Van Winkle .	rises from 67% in Grade III to 100% in Grade VII
The Barefoot Boy	rises from 69% in Grade III to 93% in Grade VIII
Paul Revere's Ride	rises from 77% in Grade III to 96% in Grade VII
The Great Stone Face	rises from 21% in Grade IV to 96% in Grade VIII
Christmas at the Cratchits' . .	rises from 73% in Grade IV to 98% in Grade VIII
The Chambered Nautilus . .	rises from 30% in Grade V to 93% in Grade VIII
Lochinvar . . .	rises from 68% in Grade V to 98% in Grade VIII
The Legend of Sleepy Hollow	rises from 66% in Grade V to 100% in Grade VIII
The Skeleton in Armor . . .	rises from 55% in Grade V to 92% in Grade VIII
The Man Without a Country . .	rises from 63% in Grade V to 97% in Grade VIII

TABLE XI

The Gains from Grade to Grade in the Percentages of Teachers and Pupils Favoring Certain Representative Selections

(The percentages are based upon the numbers of teachers and pupils judging the respective selections)

Selections		The Gains from Grade to Grade
Aladdin	Teachers	rises from 95% in Grade III to 98% in Grade V
	Pupils	rises from 86% in Grade III to 93% in Grade V
Dick Whittington	Teachers	rises from 97% in Grade III to 99% in Grade IV
	Pupils	rises from 89% in Grade III to 91% in Grade IV
The Barefoot Boy	Teachers	rises from 75% in Grade IV to 93% in Grade VIII
	Pupils	rises from 68% in Grade IV to 99% in Grade VIII
Paul Revere's Ride	Teachers	rises from 83% in Grade IV to 96% in Grade VII
	Pupils	rises from 64% in Grade IV to 94% in Grade VII
Christmas at the Cratchits'	Teachers	rises from 73% in Grade IV to 98% in Grade VIII
	Pupils	rises from 81% in Grade IV to 90% in Grade VIII

TABLE XII

Selections Which are Used Both Too Early and Too Late in the Reading Course

(The percentages were derived as in Table X by dividing the number of teachers favorable by the total number of teachers judging the respective selections. Data from Questionnaire II)

Selections	The Rise and Decline in the Percentages of Teachers Favoring the Use of These Selections in the Grades Named					
	Grades	Per cent favorable	Grades	Per cent favorable	Grades	Per cent favorable
The Village Blacksmith	II	64	V	97	VIII	81
The Pied Piper	II	88	V	97	VIII	88
I Saw a Ship a-Sailing	I	85	II	97	III	86
The King of the Golden River	IV	86	VI	98	VIII	87
The Walrus and the Carpenter	III	86	V	97	VI	81

the versions in the more advanced readers may be more effectively written than those in the primary readers, or the pupils of the later grades may be able better to appreciate the story itself. In the case of *The Village Blacksmith* and *The Barefoot Boy*, there is a distinct gain in the percentages of teachers who favor substantially the same versions. Many other selections rise in favor from grade to grade. This is shown in Tables X and XI. When one finds these selections placed far earlier than the grade in which they are most favored, one may well question the grading of a course of study unless unusual conditions on the part of either the teachers or the pupils justify such placement.

Selections which decline in favor from grade to grade. Other selections rise to a maximal percentage of teachers favoring them and then gradually decline as shown in Table XII. A decline in favor occurs less frequently than a rise in favor because many selections are attempted long before they begin to be appropriate, while few are used after they become too easy. Among the few clear cases of this sort is *The Ugly Duckling*, which is usually more popular in Grade III than in Grade IV. In the second questionnaire, the percentage of teachers favoring this selection declines from 90 in Grade III to 83 in Grade IV. The pupils' favorable judgments on this selection show a corresponding decline from 90 per cent to 85 per cent for the same grades. *Picciola* declines from 94 per cent in Grade V to 77 per cent in Grade VII. There is evidence that the same conditions hold for *The Little Match Girl*, judged as too immature by 20 per cent of the teachers in Grade V; likewise, *Hiawatha* declines from 97 per cent in Grade V to 86 per cent in Grade VI, where 6 per cent of the teachers assert that it is more suitable for children of lower grades.

Selections whose unpopularity is attributed to their difficulty. In Table XIII are catalogued examples of selec-

TABLE XIII

Examples of Selections Whose Unpopularity Is Attributed to Their Difficulty

Selections	No. of Teacher Judgments	Pct. of Unfavorable Responses	Percentages of Responses in which These Terms Were Used		
			Too mature	Hard words	Unfamiliar subject matter
Grade III					
The Maple . . .	22	100	95	—	—
The Flying Trunk .	40	97	85	—	—
The Czar and the Angel	34	88	82	15	—
Grade IV					
The Factory Boy .	22	100	95	—	—
The Argonauts . .	48	96	43	43	14
Boyhood in the South	36	94	69	25	—
Grade V					
Industry	27	100	33	26	4
Glimpses of the Great Commoner	19	100	67	11	22
Capturing the Wild Horse	25	96	65	45	—

tions whose unpopularity is attributed to their difficulty. Of the total comments upon the reasons for this unpopularity nearly all can be subsumed under the term *too mature* or under closely related terms. These selections and others of the same difficulty, if used at all, should be placed at least two years later. Fortunately, the books which contain the greatest number of these selections are being displaced by better graded series of readers. It was probably unnecessary to send a questionnaire to teachers to find out that selections with the following titles do not belong in the intermediate grades: *Lying, Sleep, The Blessings of*

Poverty, Industry, The Highest Aristocracy, The Death of Socrates, and Gray's *Elegy.*

Agreement among teachers regarding the need for flexibility of placement. If some teachers agree on the suitability of a selection for one grade, others agree on its suitability for one or two adjacent grades. As examples of this extended agreement, *Rip Van Winkle, The Legend of Sleepy Hollow,* and *Horatius at the Bridge* are agreed upon as suitable for Grades VII and VIII, with a strong probability of success in Grade VI. In very few cases do we find single grades as the outstanding positions in which selections are successful. Consequently, a general principle of placement may be adduced; that is, if a selection is highly desirable for any given grade, it is likely to be a favorite in at least one adjacent grade. The placement of a selection in one particular grade will depend upon some additional consideration other than its possible value from the grade teachers' point of view: such considerations, for example, as the academic standards in a given school, the social value of the selection, or its relation to other school work.

The relation between comprehension and interest of pupils. The correlations between pupils' comprehension and interest for each grade and for all grades taken together are either " marked " or " high." That is, if pupils comprehend a standard reading selection they are likely to be interested in it, and *vice versa.* Before discussing these correlations, several exceptional cases shown in Table XIV will be discussed. First, some selections, as *Paul Revere's Ride,* are interesting, although pupils' comprehension scores for them are only fair; such selections are always found to contain one or more of the important desirable qualities in an obtrusive form. Selections of another group, as *Phaëthon,* are comprehended, although for definite reasons they are not greatly enjoyed in any grade; such selections

TABLE XIV

Pupils' Comprehension of and Interest in Selections Read in Different Grades

(Percentages of pupils who answered correctly the comprehension questions on the selections read and of pupils who said they were interested in the selections)

Selections	Percentages of Pupils Comprehending or Interested in the Selections Read						
	Grades	III	IV	V	VI	VII	VIII
The Leak in the Dike	Comprehension	88	92	96	—	—	—
	Interest	97	96	99	—	—	—
Excelsior	Comprehension	21	42	58	67	73	79
	Interest	39	37	38	47	69	66
Phaëthon	Comprehension	63	73	91	—	—	—
	Interest	65	61	67	—	—	—
The Village Blacksmith	Comprehension	65	74	74	90	—	—
	Interest	88	91	97	97	—	—
The Ugly Duckling	Comprehension	73	88	96	—	—	—
	Interest	90	85	85	—	—	—
The Barefoot Boy	Comprehension	—	45	61	68	81	86
	Interest	—	68	81	87	100	99
Dick Whittington	Comprehension	88	90	91	97	—	—
	Interest	89	91	88	84	—	—
Abou Ben Adhem	Comprehension	—	—	47	59	61	47
	Interest	—	—	52	53	55	55
Cosette	Comprehension	71	88	94	—	—	—
	Interest	75	80	90	—	—	—
The Wreck of the Hesperus	Comprehension	73	74	82	86	89	89
	Interest	52	66	71	74	85	78
Aladdin	Comprehension	59	59	81	81	83	—
	Interest	86	87	93	84	81	—
Paul Revere's Ride	Comprehension	—	42	53	68	75	65
	Interest	—	64	76	92	94	100
The One-hoss Shay	Comprehension	—	—	—	77	80	75
	Interest	—	—	—	67	76	82
Gettysburg Address	Comprehension	—	—	—	62	72	70
	Interest	—	—	—	81	82	82
The Chambered Nautilus	Comprehension	—	—	—	42	51	42
	Interest	—	—	—	31	34	34

TABLE XIV — *Continued*

Selections	Percentages of Pupils Comprehending or Interested in the Selections Read						
	Grades	III	IV	V	VI	VII	VIII
Douglas and Randolph .	Comprehension	—	—	70	80	85	82
	Interest	—	—	59	70	89	98
Munchausen Tales . .	Comprehension	—	—	69	76	89	90
	Interest	—	—	78	76	84	84
Marco Bozzaris . . .	Comprehension	—	71	—	61	68	66
	Interest	—	81	—	60	73	54
Christmas at the Cratchits'	Comprehension	—	—	68	70	80	88
	Interest	—	—	84	84	86	90
What Constitutes a State	Comprehension	—	—	—	46	52	58
	Interest	—	—	—	31	44	55

Correlation by grades = .68 .70 .62 .69 .71 .64

Correlation for all grades = .56 (Pearson formula)

$$= .68 \left(\frac{6\,D^2}{N(N^2 - 1)} \right)$$

are always found to contain one or more of the undesirable qualities. Still other selections, as *The Ugly Duckling*, *Aladdin*, and *The Wreck of the Hesperus*, are, owing to their lack of appeal to older children, less interesting to pupils of the highest grades in which they were read than to pupils of lower grades. As a rule, however, selections are both comprehended and enjoyed or else neither comprehended nor enjoyed.

In addition to the questions upon selections as measures of comprehension, the pupils were asked to state why they liked or disliked each of the selections judged. They reported that certain selections are " too hard for our grade," contain " too many hard words," and so forth. These comments on over-maturity show a correlation of .77 with

the understanding of the selection as measured by comprehension questions.[1] Comprehension is still further tested by comparing pupils' statements about over-maturity with the statements of teachers about the same selections; here, there is a correlation of .71. Teachers' comments about over-maturity and pupils' comprehension scores in the questions give a correlation of .59. The same comprehension scores give a correlation of .56 with the percentages of teachers' favorable responses regarding the same selections. If, then, a selection is judged by teachers and pupils as too mature, the pupils' ability to pass a test on the selection is closely parallel with the stated amount of maturity.

Diagram III shows some of the differences in the amounts of teaching required for the success of such selections as *The Leak in the Dike*, *Dick Whittington*, and *Cosette* as compared with such selections as *Abou Ben Adhem*, *The Chambered Nautilus*, and *What Constitutes a State*. This series of diagrams shows also the decline in interest in such juvenile selections as *The Ugly Duckling*, *Phaëthon*, and *Aladdin*, while pupils' understanding of them increases. The decline in the comprehension scores of Grade VIII is accounted for by the fact that a school which raised considerably the scores for Grades VI and VII has no eighth grade.

Comparison of teachers' and pupils' reactions to reading matter. A comparison of pupils' and teachers' statements shows the extent of agreement of the judgments of carefully selected teachers. Table IX shows that *The Ugly Duckling* was favored by 91 per cent and 83 per cent of the teachers of Grades III and IV, respectively, and by 90

[1] For a discussion of correlations, see H. O. Rugg, *Statistical Methods Applied to Education*, Houghton Mifflin Company, 1917. The correlations given above indicate that there is close agreement between the different judgments upon the selections judged.

DIAGRAM III

Graphical representation of changes in pupils' interest in and comprehension of certain selections in successive grades. Based on Table XIV. (———— equals Comprehension; ---------- equals Interest.)

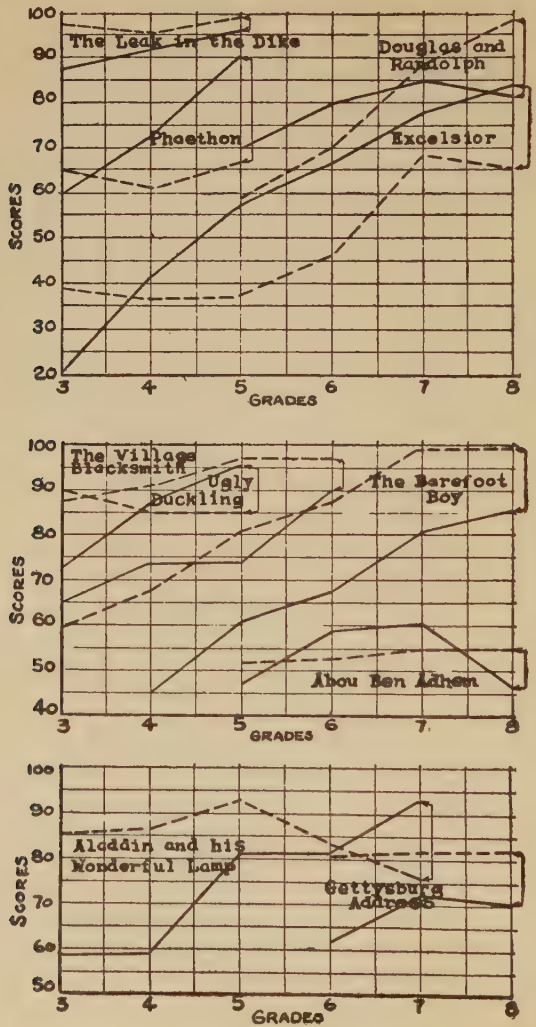
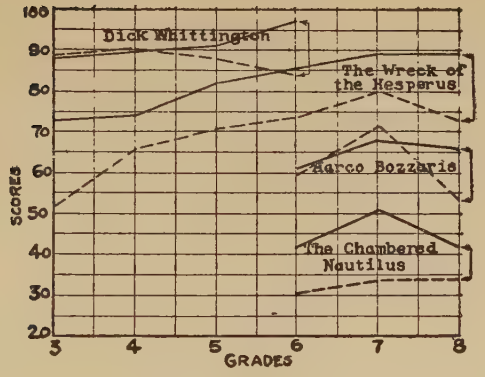
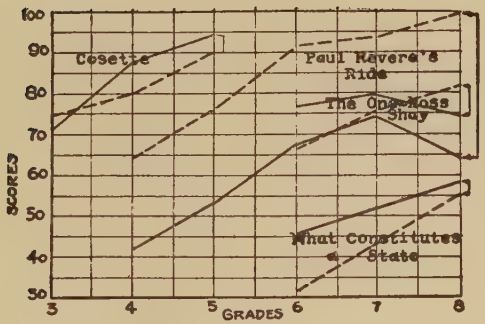
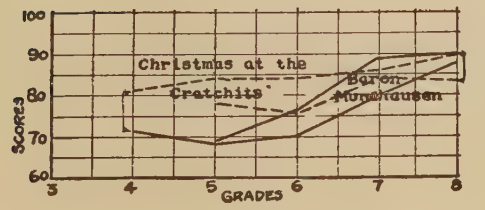


DIAGRAM III—*Continued*







per cent and 85 per cent of the pupils of the same grades. The agreement of these teachers' judgments of *The Village Blacksmith* is about equally great; they rate it favorably as follows in four consecutive grades: 80 per cent, 94 per cent, 97 per cent, and 94 per cent; pupils of the same grades favor it in the following percentages: 88, 91, 97, and 97. Tables XIV and XV show typical comparative results obtained from teachers and pupils.

Another line of agreement between teachers and pupils is found by comparing the cases in which both groups of judges assert that certain selections are too mature or contain too many hard words. Here, the correlation is " high " (.71). The accuracy of teachers' judgments on this matter can be checked. Teachers' comments on *too mature* and *hard words* give a " marked " correlation (.59) with pupils' comprehension scores, while these scores, in turn, give a " high " correlation (.77) with pupils' comments regarding over-maturity. Inasmuch as significant correlations are found in all these cases, one may trust the judgments of a representative group of teachers regarding the maturity of reading matter and pupils' interest in it.

Teachers generally give a slightly higher rating to selections than pupils do. Certain selections are greatly overrated by teachers, as *The Chambered Nautilus*, *Marco Bozzaris*, and *What Constitutes a State* in Grade VIII and *Phaëthon* in Grades IV and V. These cases are, however, exceptional. A selection rated favorably by from 90 per cent to 100 per cent of the teachers is usually favored by from 80 per cent to 100 per cent of the pupils. Out of the fifty-five cases in Table IX in which both teachers and pupils judged the same selections, only six failed to conform with the rule just stated.

Summary of correlations among judgments. From the foregoing discussion we draw the following conclusions.

TABLE XV

The Qualities Mentioned by Teachers and Pupils in Their Comments on the Same Selections for Each Grade

(The percentages of frequencies do not total 100 because less frequently mentioned qualities are omitted)

Selections	Grade	Teachers or pupils	Qualities													
			Interesting problems	Interesting characters	Interesting action	Interesting information	Humor	Adventure	Kindness	Moral	Well told	Rhyme rhythm	Easy	Too sad	Hard words	Too mature
The Leak in the Dike	III	T	2	7	3	4	—	58	10	6	2	—	2	—	—	—
		P	11	5	—	5	—	39	16	20	—	—	2	—	—	—
	IV	T	—	7	5	5	—	57	14	3	1	—	3	—	—	1
		P	7	—	—	7	—	36	27	—	—	—	—	—	—	—
	V	T	4	5	2	5	—	52	11	5	2	—	9	—	—	—
		P	11	—	—	3	—	55	—	25	3	—	—	—	—	—
Dick Whittington and His Cat	III	T	15	10	2	—	—	23	13	5	7	—	10	—	—	2
		P	22	20	—	—	—	—	23	1	18	—	1	1	—	—
	IV	T	15	16	5	1	2	17	13	4	10	—	8	—	—	—
		P	17	39	—	—	—	—	7	8	25	—	—	1	—	1
	V	P	17	15	—	—	—	—	4	17	40	—	—	—	—	4
	VI	P	25	17	3	—	—	—	1	3	28	—	6	6	—	—
The Village Blacksmith	III	T	—	10	19	—	—	—	—	3	5	25	11	—	6	14
		P	7	34	—	—	—	—	29	16	—	7	1	—	1	3
	IV	T	1	10	16	—	—	—	4	13	5	23	16	—	—	1
		P	—	50	—	—	—	—	14	18	1	6	1	1	—	8
	V	T	2	7	20	—	—	—	5	12	2	15	17	—	—	—
		P	26	44	—	—	—	—	4	10	—	8	4	—	—	4

(1) Three kinds of teacher-pupil measurement show correlations ranging from "marked" to "very high" when taken in any combination. (2) Selections which show irregularities of judgments of teachers of either questionnaire or of pupils must be regarded as at least questionable for use in the grade concerned. (3) A classification of selections with reference either to pupils' interests or comprehension can be accurately made by studying the comments of teachers upon selections which we have not presented to the pupils. In order to bring the correlations together, Table XVI is presented.

TABLE XVI

Correlations between Teachers' and Pupils' Reactions to Reading Selections

Pupils' interests and comprehension in all grades	.66
Pupils' comprehension and teachers' interests in selections	.56
Teachers' and pupils' comments as to over-maturity in selections	.71
Pupils' comments on over-maturity and their comprehension scores	.77
Teachers' comments on over-maturity and pupils' comprehension scores	.59
Teachers' (Questionnaire I) and pupils' interests	.63
Teachers' (Questionnaire II) and pupils' interests	.48
Teachers' (both questionnaires) and pupils' interests	.66
Teachers' interests (Questionnaires I and II)	.47
Teachers' (Questionnaire II) and pupils' mention of "determining" desirable qualities in case of selections read by pupils	.87
Teachers' (both questionnaires) mention of "determining" desirable and undesirable qualities in case of selections judged by both groups	.67

An optimal placement for all reading selections. In the foregoing discussions, reference has been made to several different groups of selections, namely, those in which there is a gradual development of interest followed by a decline,

those in which there is a gradual development followed by a long and undetermined period of interest, and also selections in which there is little interest until near the end of the eighth grade. The data collected indicate that selections of the last-named group may be used in only the later grades of elementary schools of average academic standards. Selections in which there is a gradual development of interest followed by a gradual decline should be placed in the grade in which interest is at its height. Such selections are limited with reference to both the lower and upper limits of their use. The remaining group of selections, those in which there is a gradual development of interest followed by a long and undetermined period of interest, should be placed in one of the grades in which interest is great. These selections are limited only with reference to their lower limits of use.

Summary. Present-day practice shows a considerable variation in the placement of reading materials. A certain amount of variation is justified by the varying academic standards of different schools. The success of the reading material is dependent in part upon the grade in which the material is read. This is shown by the fact that certain selections gain in favor from grade to grade while others decline in favor. Most selections become appropriate for use in a given grade and are appropriate for at least one later grade. Teachers agree, therefore, that the grading of selections should be flexible. There is very close agreement between pupils' interest in and comprehension of reading matter. Also, there is close agreement between the judgments of teachers and pupils. Owing to the presence of the judgments of an adequate number of teachers, it is now possible to place standard reading selections in the grades in which they will produce the greatest possible benefit to pupils.

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CHAPTER V

ORGANIZING THE PHYSICAL CONDITIONS OF READING

Selling books to children. Every teacher of reading or literature is a book salesman or saleswoman. The teacher must, therefore, use the salesman's methods. In addition to the use of the more common methods of salesmen, the teacher must give years of training to the persons who contract for the books. Much of this training falls within the scope of the methods of teaching; this aspect of the matter will be treated in Chapter X. The present chapter will describe ways in which the physical conditions of reading can be organized for wider use of reading materials.

The teacher's task of salesmanship involves not the provision of books for children to read; it involves instead the sale of the desire to read books. Certain definite principles by means of which the desire to read books is cultivated have been evolved by experienced librarians. A recital of three of these principles will suffice to show their importance to the teacher of reading.

(1) "The book must be taken to the reader, not the reader expected to seek the book. In proof of this, witness the branch libraries constantly springing up in outlying districts, and those not in the homes of the well-to-do, cultivated members of the community, but of the working man and woman and boy and girl, who may be enticed by the convenience of a library's location to become its regular patrons.

(2) "The indifferent reader, once within the door of the library, must be welcomed by an atmosphere of cheer and homelikeness.

(3) "The impractical reader must be helped (*a*) to find

what he wants; (*b*) to want constantly more and more; (*c*) to want ever better and better." [1]

How can the teacher carry out these principles? Answers to this question will be drawn from the experiences of librarians and teachers.

How to take books to readers. Books are usually taken to the reader by making them accessible to readers and prospective readers. Public librarians have been active in recent years in increasing the accessibility of books. They have established branch and " circulating " libraries as well as " open shelves " within their main libraries. A great increase in the number of books drawn out by library patrons attests the value of these distributing devices.

Librarians have often " sold the desire to read " by means of publicity plus careful organization of their reading materials. In Providence, Rhode Island, for example, the newspapers have kept the public informed about the library by means of weekly library notes. Miss Van Kleeck describes as follows the effects of such publicity combined with careful organization of book lists and comments:

"In Providence, Rhode Island, where 70 per cent of the wage-earners are engaged in three industries — textile, jewelry, foundry and machine-shop work — the library has made a special study of those subjects and collected nearly 10,000 volumes with printed lists and comments that enable a workman to find exactly what he wants. A drafting-table, tracing-paper, 'dark-room' for developing plates, and other conveniences are provided. Men often come directly from their benches to find a solution of some problem that has confronted them. (For thirty years, without missing a single week, the Providence, Rhode Island, papers have been supplied with library notes.)

[1] Breck, Emma J. The Efficient High-School Library. *English Journal*, V, 10–19. 1916.

"In St. Joseph, Missouri, an automobile enthusiast wrote to the librarian suggesting the purchase of two books in which he was interested. The librarian replied that the books were already on the shelves and that he could also obtain a number of others on the same subject. This incident led to the publication in an afternoon newspaper of a list of books on some industry, a different subject every day for thirty days. As a result, the demand for books nearly doubled within four months." [1]

It will be seen that no small part in engaging the reader's attention is accomplished by making the right kinds of books easily accessible. In order to emphasize especially valuable books, librarians have long maintained shelves and cases for certain types of books, as the " new book shelf," the shelf for books on current affairs, and the shelf for recent fiction. Such featuring of important books has grown out of the " open shelf " plan, and a recognition of its value in increasing interest in books and reading. The success of these plans and devices recommends them not only to school librarians but also to classroom teachers, for such devices aid greatly in increasing the interest of children in reading.

Miss Rosenberg describes three processes by means of which the Detroit public library not only increased its circulation but also improved the quality of reading tastes. The three processes by which the public can be reached are, Miss Rosenberg asserts, by elimination of undesirable books, by substitution of desirable books for undesirable ones, and by familiarization of the public with fine literature. Her description of the use of these methods and the results achieved are noteworthy. Make the good as attractive as the poor, she says. By this is meant the pur-

[1] Van Kleeck, Irene. Libraries That Reach All the People. *World's Work*, XV, 10105–10107. 1908.

chasing of substantial editions and then placing them where library patrons can handle them and choose for themselves. An instructive case is that of the works of Jane Austen. These works, when placed in an obscure corner in unattractive binding and print drew little attention to themselves. *Sense and Sensibility*, *Mansfield Park*, and *Emma* were drawn from the library only thrice, twice, and once, respectively, in a certain year. Later, a new edition of these books was purchased — one with excellent type and fairly attractive binding. The books were then placed in the open-shelf room. The result was that *Sense and Sensibility* was drawn from the library eighteen times in nine months; *Mansfield Park*, sixteen times; and *Emma*, twenty-two times. Another example is that of White's *Natural History of Selbourne*. When an unattractive, cheap little volume was replaced by a beautifully bound and illustrated two-volume edition, this work was drawn from the library five times in five months. Previously it had been out of the library only once in fifteen months. Similar results were achieved in the case of the works of Scott, Thackeray, Hawthorne, Irving, and Hugo. New, well-bound, illustrated editions of these books, when placed on the open shelves, were soon "read to a state of shabbiness."

"A word concerning the open-shelf room. One of the largest and pleasantest rooms in the library has been utilized for the open shelves. Here are kept some 25,000 books, most of them selected. Statistics of 1906 show that this room controlled one-fourth of the entire circulation for the year. During 1907 this percentage was increased to more than one-third.

"One case capable of holding 150 books is given to late fiction. . . . Another of like capacity contains new books other than fiction. A third is for bound magazines. A fourth is for the rental collection. . . . Aside from these,

the books in this room are selected and most of them changed from time to time. Here are kept in one collection some 300 of the world's best books. At first the idea was conceived of placing the great world classics here, believing it possible in this manner to introduce the grandest literature of all time to appreciative readers, who might otherwise never know them. . . . Finally, about 150 really great books appeared on the open shelves with a sign calling attention to them.

"Now for the result. Mazoni's *Betrothed* circulated eighteen times in one year as opposed to four times in the previous year. Pascal's *Thoughts*, which had left the library once the year before, was taken out ten times from the open shelves. We may even mention the *Koran* as an instance. This journeyed twice only in one year before it appeared here. Last year it was taken out eleven times.

"The conclusion of the whole matter is this: the library can, and in many cases does, guide and direct the reading of the public into channels which it would never know but for that guidance. It can and does draw the mind and attention of people, old and young, from that which is injurious to that which is uplifting and enlightening. But this cannot be done by forcing unsought assistance upon even the least of these. Indirectly, through suggestion, is the only way to influence or guide that supremely indifferent creature, the 'American public.'" [1]

The accessibility of books is sometimes restricted lest pupils will neglect required reading for joy reading. Teachers are, of course, aware that a real problem lies here, but it behooves the teacher of reading and literature to show that the cure for neglect of required work lies in another direction. We do not cover the excellent pictures that adorn some schoolrooms and thus expect pupils to attend with single-mindedness to their books. Instead, we set

[1] Rosenberg, Ida. Directing the Taste of Casual Readers. *Public Libraries*, XIII, 294–299. 1908.

up conditions which require pupils for the time being to disregard the pictures and pursue their lessons. Likewise should we do with books and reading; we should set up conditions which will require pupils to work at their lessons until a joy-reading or "browsing" period seems to be appropriate. The desire to read is too important to be restricted simply because certain teachers are careless in their management of pupils' study periods. The remedy for over-indulgence in the reading of trivial literature lies in the provision of excellent opportunities for profitable reading rather than in attempted suppression of the less profitable. It would be well for teachers to recognize that a few pupils do and will waste time at some diversion, but that there are insufficient reasons for penalizing the whole group therefor.

The case against restrictions of reading is ably presented by Johnson:

"The library permits which the teacher issues to the pupil must bear the name of the book to be read. This is a virtual prohibition for such pupils as have not reference assignments to do. Oftentimes the assignment is only a few pages in length, and if the rule is vigorously carried out, the pupil must not take from the shelf some book of his choice to read for the remainder of the hour. Furthermore, it is not always possible for the pupil to obtain the book indicated upon the library slip. In such a case he may as well return to the study hall and pore over his text. . . . Why should we maintain libraries for our school children and then say to them: 'This storehouse of knowledge, information, and entertainment is yours, but we can't let you in. Most of it isn't good for you, but here is a tough little article on which you can cut your teeth. Chew it for an hour.'" [1]

[1] Johnson, Roy Ivan. The School and the Library. *English Journal*, VI, 244–245. 1917.

The possibilities of interesting children by bringing books to them, as well as the importance of extensive reading are shown in Miss Guilfoile's report upon the use of the public library in teaching reading. The class upon whose work her report is based consisted of backward pupils of Grade IV. After making a careful analysis of the pupils, Miss Guilfoile decided that extensive training in oral and silent reading was needed. As the children were over-age for their grade, the simple supplementary readers of the lower grades did not appeal to them. Consequently,

"Books were obtained from the public library. A library club was organized and a drive for membership started. To become a member the pupil had only to obtain a membership card from the local branch of the public library and present it at school. By the end of a week thirty children had joined.

"The teacher with a committee of ten went to the library and selected the books. On this committee were the oldest child in the class and the youngest, the best reader and the poorest, the boy who liked mechanics, and the girl who liked fairy stories. In short, we tried to represent each type of interest to be found in the class.

"The books were placed on a table in the room to which all the class had access. There were never less than sixty volumes. The books might be kept a month by having them renewed, and at the end of that time the class was ready for a new set." [1]

By giving individual training in the use of the library books, Miss Guilfoile was able, within four months, to bring these pupils past the standard norms of the Monroe reading test.

[1] Guilfoile, Elizabeth. Using the Public Library in the Teaching of Reading. *Elementary School Journal*, XXII, 127–128. October, 1921.

"But aside from the gain in reading ability," Miss Guilfoile concludes, "the class gained other things of at least equal value. They learned the use of the public library and the care of the books that are public property. They learned to some extent literary values. They can distinguish a good book from a poor one. They have become acquainted with a volume of literary material with which they should have come in contact in their earlier childhood, both through their own reading and through listening to others. They have found for themselves new worlds which they can explore independently." [1]

Another method of bringing books to the reader consists of making an exhibit or display of attractive books for use in connection with school topics. Such displays are made with reference to the seasons of the year, festivals, current affairs, and the problems upon which certain classes are working. A display of books upon a class topic is exemplified by an Ivanhoe "exhibit." This exhibit consisted of materials, editions, and illustrations, and was planned so as to show the reactions of pupils toward the material.[2] It was found that pupils regarded the lesson as an intellectual game. In no case was a pupil content with only a single reference; some pupils even made attempts to evaluate the references given.

Hospitable reading places. We often hear of the gloomy quarters in which certain writers have produced notable books. It is likewise recorded that certain persons have read very profitable literature by the dim light of candles. As a consequence of such cases one might conclude that no pains need be taken to make reading places particularly

[1] Guilfoile, *op. cit.*, p. 131. The individual training given to the pupils is described in this article.

[2] Logasa, Hannah. The Story of an Ivanhoe Exhibit. *English Journal*, VI, 175–178. 1917.

hospitable. One should remember, however, that very, very few persons read extensively in the days of dim lights, and that America is now face to face with the problem of cultivating reading interests in great masses of men and women.

In order to make reading places attractive some teachers have made cozy corners in their own classrooms. Likewise, school librarians have made their libraries models of order, simplicity, and, sometimes, of grace.

Giving training in the mechanics of books and libraries. The difficulty encountered by the untrained adult who, for the first time, is referred to a library "catalogue" is comparable with that encountered by a youngster of rural breeding who is suddenly transported to a metropolitan city in which dependence must be placed on the announcements of street-car conductors. Few workers even suspect that technical information which would lead to better positions can be found in public libraries. The deterring effects of this lack of knowledge of what a library contains, together with inability to use the devices of the library are of too serious import to be overlooked or tolerated. The problem of the adult who wishes to acquaint himself with a library is similar to that of a school child who seeks his first library book; the solution is also the same for adult and child.

In order to enable children of the present day, or the adults of the next generation, to use libraries, children should be taught the mechanics of books and libraries. A good description of the training required for the effective use of books has been given by Florence M. Hopkins.[1] This training was given as a high-school course whose aims

[1] Hopkins, F. M. Is There Need for a Course in the Choice and Use of Books in Our High Schools? *Proceedings of the National Education Association*, 1912. Pp. 1285–1288.

were to enable pupils to get the gist of books quickly, to see and examine many books, to examine tables of contents, and to find books which might later be read at leisure. The belief of the teacher was that the students should become acquainted with many books and learn to differentiate between the books which are to amuse, to instruct, or " simply to make a crowd."

The course was a three-hour elective for juniors and seniors and met twice a week for sixty-minute periods. The course opened with a study of the main divisions of library classification plans. Next, the leading reference books and other representative books were examined with reference to high-school pupils' needs and interests. The next series of lessons was based upon the different divisions of the library classification. In order to give the pupils a foundation for work, they were provided with a very brief outline of points by which to examine books.

Also the library divisions were approached by means of some simple selection or quotation which set forth the spirit of the division. For example,

"Under the division of sociology an effort was made to have the pupils feel that they were part of a great age which was awakening to human interests and brotherly love to an extent never known before in the history of the world. As the Renaissance of the fifteenth century emphasized divine love thru the portrayal of the Madonna and Child, the renaissance of the twentieth century is being expressed thru civic interests, legislative care of dependent classes, international peace, and in a hundred other ways. Such magazines as the *Survey* and *Charities* were used as examples. The marvelous system of education, with concrete examples of their own benefit from it was shown to be a vital part of this great subject. Pupils delight in a rapid survey of the development of education, and really enjoy short

extracts from such books as Butler's *Meaning of Education*, Spencer's *Education*, and other selected material if they are left free to catch the spirit of it and are not required to recite on it too closely. With very little direction the life work of men such as Comenius, Rousseau, Herbart, Froebel, Pestalozzi, could easily be recognized and correctly placed by the class. Under the topic, government, a few sentences from the first book of Plato's *Laws* interested the class in seeing that over 2,000 years ago the secret of all national government was realized in the government of self. In this division, as in each of the others, when possible, pupils were sent to the shelves to determine what books the library possessed on the subject. Often a carefully selected number of books were passed around the class promiscuously, each pupil taking one, spending five minutes in examining it, and then reporting on it as best he could, judging wholly from the table of contents, index, publisher, and general arrangement. Such exercises as these revealed an unexpected power on the part of the pupil to grasp books as wholes." [1]

Lessons in how to use the library must of course be given in the elementary school if a high percentage of the possible library patrons are to be reached. Such lessons are given in the schools of Seattle, Washington.

"Two lessons are given in the school-rooms of the seventh grade on the classification and arrangement of books and the use of the card catalogue and three lessons in the eighth grade including one on the *Reader's Guide*. These are followed by a practice lesson in the library. In one school these lessons were followed in the seventh grade by a language lesson in which the pupils wrote formal letters of appreciation to the children's librarian, and these letters were sent to her at the central library. One boy wrote: 'Altho I was not much interested in the work you was doing

[1] Hopkins, *op. cit.*

in school, I listened and am glad I did. I did think that I would never get it into my head, but when I got to the library I followed your directions and found it easy. Now that I know how to find books, I do not have to trouble the librarian.'

"A girl wrote: 'I always dreaded to go to the library because I had to spend three or four hours in the library to get my books. Now I can get away in 15 minutes.'" [1]

How the physical make-up of books affects interest in them. A ninth-grade boy was asked what he thought of Walter Scott's novels. "Walter Scott," said he, "oh, yes, he is the man who wrote those funny-looking little books in the library. Why, I never opened one of them. I guess they are all right though."

Books themselves largely determine by their physical appearance their own usefulness for schools. A casual inspection of school libraries gives a partial proof of this fact. Such an inspection shows few physically attractive books on the shelves as compared with the large number of unattractive books which seem to be quite at rest so far as circulation is concerned. A more thorough inspection of a library commonly shows that the newer and more attractive books circulate constantly, while the older and less attractive books remain untouched. Although the older books often lack content, this deficiency is not the sole reason for their disuse.

Ample proof of interest in attractive editions of either old or new books is furnished by library experience as well as by every teacher who has made a trial of the matter. For example, some libraries contain cozy corners in which are placed for use in the library only, many superb editions of standard books. Frequent observation of such a sequestered nook convinces one that the age of books has

[1] School Library Notes. *Public Libraries*, XXVI, 1921. P. 352.

little to do with their popularity. Dickens vies with Stevenson; Grimm's tales rival both Dickens and Stevenson, while ancient Chaucerian tales in new cover and with Mackaye's new version become attractive.

Another form of evidence of the possibility of attracting children to old books is supplied by Fay and Eaton, who suggest that teachers try the experiment of placing two different editions of the same book in a classroom library. Under such conditions a dingy, small-type *Robinson Crusoe* with a textbookish appearance will remain untouched, while an attractive edition with plenty of illustrations will travel at once. Children's librarians tell of the little-used book that returns from the bindery in a fresh red cover, and then " starts out on a career of popularity. Cover and pictures alone will not make a book popular, but a dull-looking exterior will certainly cause many a treasure to lie undiscovered." [1]

Further evidence of the same kind is given by Frances Jenkins Olcott in her discussion of children's reading.

"The outward form of a book, its effect on the eye, has much to do with arousing or depressing a child's interest in it. The writer has made many experiments which help to prove this fact. The placing on the shelf of the public library of a classic in textbook or other dull cover, and printed in small, close-set type, insures that the classic will carry out the saying: 'Be good and you'll be lonesome.' It is rarely stolen and rarely worn out; two proofs of unpopularity. But place on the shelf the same work in a gayly covered edition, illustrated in color, printed in clear attractive type, and presto! the book disappears legitimately or otherwise. And often a child who reads this attractive volume will tell other children about the story,

[1] Fay, L. E., and Eaton, A. T. *The Use of Books and Libraries.* The F. W. Faxon Company, Boston. Rev. ed., 1919. P. 375.

and, behold, the formerly despised, homely volume becomes fashionable.

"A child's idea of an attractively bound book is not according to the æsthetic taste of the literary connoisseur. The book that fills a child with keen longing to read or to own it for himself, and which frequently induces him to steal from the library shelves, is the one with a bright cover, — red preferably, — illustrated with story-telling pictures, and rich with gilding. A classic in such guise can well hold its own against the highly decorated modern juvenile that drives the textbook-covered classic into humble shadow. Little books, 'pocket editions,' have such a fascination for small children that hundreds of *Peter Rabbits*, *Benjamin Bunnies*, and *Little Girl Blues* vanish yearly from the library shelves. Many libraries, nowadays, keep these pigmy beings under lock and key, lending them only to highly respectable infants." [1]

An extensive investigation has been conducted by Florence E. Bamberger for the purpose of determining the effect of the physical make-up of a book upon children's selection.[2] In planning the investigation, provisions were made for the isolation of the different elements which might determine choice, so that the size of books, the color of the bindings, the illustrations, and attractiveness of the pages could be studied separately.

In carrying on her investigation, Miss Bamberger used five different stories: *Cinderella*, *Black Beauty*, *Peter Rabbit*, *Little Black Sambo*, and *The Night Before Christmas*. These editions varied in size, binding, type of illustrations, and amount of content. The method of experimentation

[1] Olcott, F. J. *The Children's Reading*. Houghton Mifflin Company, 1912. Pp. 148–149.

[2] Bamberger, F. E. *The Effect of the Physical Make-up of a Book upon Children's Selection*. The Johns Hopkins University Studies in Education, No. 4, 1922.

consisted of telling each story up to a given point of suspense and then asking the children if they would like to finish it for themselves. Each of the five editions containing the story was then placed where all could see. The order of placing the books was varied from time to time to prevent a position error. The books were numbered from one to five, the number being placed on the blackboard directly above the volume it indicated. The children then approached the books and inspected them to see in which edition they would prefer to finish reading the story. No communication between the children was allowed. Then, upon specially prepared blanks, each child wrote the number of the edition which he preferred. This part of the experiment showed the effect of size, binding, color, and cover design upon attractiveness. Later, the children were allowed to take all five editions to their seats at one time and examine the inside of each to determine which was then considered most attractive.

In Table XVII is given a tabular description of the editions of *Cinderella* and *Little Black Sambo* used in Miss Bamberger's investigation. The books range in number of pages from 43 to 312, in area from 12 to 52 square inches, and in thickness from one-fourth to one and one-fourth inches. These characteristics, together with the color of books, their titles, and the decorations on their covers, may have influenced the children's choices.

The internal characteristics of the books show additional differences between the books. The lengths of lines vary from two to three and three-fourths inches, the marginal space from $33\frac{1}{3}$ per cent to 64 per cent of the page. The amount of space given to illustrations ranges from 25 per cent to 63 per cent; in quality the illustrations range from cheap, characterless forms done in black and white to illustrations which are full of interesting action and attractively

TABLE XVII

Tabular Description of the Editions of *Cinderella* and *Little Black Sambo* Used in Miss Bamberger's Investigation of the Effect of the Physical Make-up of a Book [1]

Edition	Pages			Illustrations				
	Number	Marginal space in per cent	Average length of lines	Per cent of book	Character of	Color	Size of book	Color of binding
Cinderella								
1. Christmas Stocking	119	64	2 in.	26	too small; cheap	red, green, black, white	3 × 4 × ½	red
2. All About	48	64	irregular	50	little action	black, white and tints	5½ × 4½ × ⅝	green
3. Red Book	57	60	3¼ in.	28	farcical and inartistic	bright primary colors	7 × 5¼ × ⅜	red
4. Elson, Primary Reader, Book III	280	33⅓	3⅜ in.	28	slight appeal	black, white, and tints	7½ × 5½ × ⅜	brown
5. Children's First Book of Poetry	312	59	3½ in.	25	full of interest	bright primary colors	7¾ × 6 × 1½	yellow
Little Black Sambo								
1. Same book as Edition 1 of Cinderella								
2. Stokes	56	61	2¾ in.	61	full of interest	bright	5½ × 4 × ½	yellow-green
3. Same as Edition 3 of Cinderella								
4. Saalfield	43	64	5	63	full of interest	bright and black and white	8 × 6½ × ½	blue
5. Same as Edition 5 of Cinderella								

[1] Adapted from Bamberger, *op. cit.*, pp. 76 and 80.

tinted or colored. The variety of internal as well as external characteristics of these books enabled the investigator to study the effects of all these characteristics upon children's interests.

Table XVIII shows the number of children tested in each of the grades with the five editions of *Cinderella* and *Little Black Sambo*. By comparing Tables XVII and XVIII, it is seen that Edition 5 was a favorite in the case of *Cinderella*, and that in the case of *Little Black Sambo* the same book was rivaled only by the handsome Saalfield gift edition. The least popular editions are the textbook containing *Cinderella* and Edition 3. The textbookish character of the Elson Reader is advanced as an explanation of the unpopularity of this edition. Edition 3 has a pinkish red cover.

"Upon each cover there is a highly colored picture of the hero or heroine of one of the stories. The title is printed at the top in glaring white letters about three-eighths of an inch in height. A crude design in white stenciling ornaments the cover.

"The inner binding and fly-leaf form a double page, this contains a border of vividly colored pictures dealing with the various scenes and characters in the stories.

"The print is of good size, and in clear black type. The lines are uniform in length and measure three and one-quarter inches.

"The illustrations are numerous in quantity, but cheap and gaudy in quality. A few artists, asked to rank in order of merit some pictures taken from children's books, refused to consider these at all, because they said they lacked all artistic merit.

"They do show well selected detail, however, and are of good size.

"Each volume contains two stories."[1]

[1] Bamberger, *op. cit.*, p. 18.

TABLE XVIII

The Number of Times Each Edition of Stories was Chosen
(These data were adapted from Miss Bamberger's Table I, *op. cit.*, pp. 27–28)

Stories	Number of Children Tested	Edition of the Story				
		1	2	3	4	5
		Number of times each edition was chosen				
	Grade			*By inspection*		
Cinderella	I 115	21	12	9	16	57
	II 100	18	8	14	8	52
	III 102	19	14	8	6	55
	Total 317	58	34	31	30	164
				By examination		
	I 115	15	10	9	10	71
	II 100	14	12	11	5	58
	III 102	12	16	16	2	56
	Total 317	41	38	36	17	185
	By inspection and examination combined	99	72	67	47	349
	Per cent	16	11	11	7	55
Little Black Sambo				*By inspection*		
	I 88	16	17	7	28	20
	II 130	12	13	11	55	39
	III 91	9	13	15	36	18
	Total 309	37	43	33	119	77
				By examination		
	I 88	18	12	8	30	20
	II 130	10	9	17	56	38
	III 93	10	10	9	49	15
	Total 311	38	31	34	135	73
	By inspection and examination combined	75	74	67	254	150
	Per cent	12	12	11	41	24

In making a comparison between Editions 3 and 5, one finds different colors in the binding, different thicknesses of the books, and, according to Miss Bamberger, differences in the quality of decoration of the cover. The internal characteristics of the books vary in width of margin, Edition 5 having the wider margin; the illustrations of Edition 5 are, however, the same cheap, gaudy kind used in Edition 3. Edition 4 of *Little Black Sambo*, the favorite edition of this story, has a combination of qualities which distinguishes it from the other editions: large amount of marginal space, large percentage of pages given to illustrations, cover and illustrations of merit from the artist's point of view, and blue cover — a favorite color, as will be shown later. It is notable that Edition 5 of *Cinderella* and Edition 4 of *Little Black Sambo* improved upon examination.

In order to isolate some of the external elements of physical make-up, Miss Bamberger covered all the books uniformly with tan paper. This device enabled her to measure the effect of size and shape. In this form, when the inspection method was used, the favorite edition of *Little Black Sambo* became the least popular, while Edition 5, the largest book, became the most popular. When the results of choices were studied for all the books, it was found that *blue* was the most popular color for the covers of books; likewise, when pupils were asked later to write the number of the book which had the prettiest color (each book was numbered), a high degree of brightness of fairly intense blue was found most popular, with yellow next in popularity.

A further test was made of the effect of titles upon children's choices. Eight hundred ten children of Grades I to III judged these titles. The titles used were made for this purpose; their ranks in popularity were as follows:

1. In a Toy Shop
2. Fairy Tales
3. The World on Wheels
4. Golden Haired Letty
5. Book of Poetry
6. The Stone Arrow
7–8. Brown Tom and Abbey Readers
9. Fine Tales
10. Stories Ever Fresh

Upon the basis of Miss Bamberger's investigation, a book which gains favor with young children by its physical make-up may be described as follows. Such a book is fairly stout; its cover is blue, bright, and highly saturated; the illustrations cover about one-half of the book space; the illustrations are colored, highly saturated and intense; the illustrations contain few details and portray action of interesting characters described in a story; the margins are generous; the lines on the page are not crowded and are about three and one-fourth inches in length.

Physical conditions and the hygiene of reading. Several physical items are closely related to the hygiene of reading. First among these is the quality of the paper upon which the content is printed. Some paper is very white and glossy. Such paper is obviously unfit for any books, and least of all for school books. When such paper is used and the schoolroom lighting so planned that the pupil sees on his page, first a glare and then a shadow, the conditions of reading are nearly at their worst. Although Ingersoll reported a decade ago the invention of a glarimeter [1] by which the amount of glaze can be measured, the effects of certain degrees of glare have not yet been measured. Teachers are, however, very zealous in regard to the prevention of cruelty to children by glazed paper.

The size and style of type must be considered together. Certain styles of type, although numbered 14-point are apparently smaller than other styles numbered 12-point.

[1] Ingersoll, L. R. A Means to Measure the Glaze of Paper. *Electrical World*, LXIII, 645–647. 1914.

Judd [1] and Gilliland [2] found that perception-recognition was not affected by the sizes of types between the ranges of 4-point and 18-point. As size increases, however, fewer words or letters can come within the span of clear vision. This fact compensates for the loss in clearness as the type becomes very small. Students of the hygiene of reading have shown that several other elements affect legibility: (1) letters should be relatively wide; (2) the face of letters should be relatively heavy, clear, and well defined; the lines of which the letters are composed should be fairly heavy; letters like *b*, *d*, and *l* should be topped with straight lines; letters like *f* and *r* should have clear ending at the upper right side; letters like *c*, *e*, and *o* should be distinguished by fairly large openings in *c* and *e* and a distinct cross-line in *e;* (3) letters should be surrounded by a sufficient amount of white space to make them distinct.

The length of lines should be from 80 to 90 millimeters. Also, lines should be regular in length. Even in books intended for the first grade where "phrasing" is desirable, irregularity of lengths of lines is to be avoided. By having short, regular lines, rapid perception and rhythmical eye-sweeps are facilitated.[3]

Summary. The teacher of reading must sell to pupils the desire to read worthy material. In order to sell this desire, it is necessary (1) that books be brought to the pupils, (2) that reading places be made hospitable, (3) that pupils be trained in the mechanics of using books and libraries, and (4) that the physical make-up of books be of such character as to interest pupils. Besides organizing the

[1] Judd, C. H. *Reading: Its Nature and Development.* The University of Chicago Press, 1918. P. 35.

[2] Gilliland, A. R. The Effect on Reading of Changes in the Size of Type. *Elementary School Journal*, XXIV, 138–146. 1923.

[3] See Chapter IX of this book for a discussion of eye movements during the reading process.

physical conditions of reading so as to allure pupils, teachers must select books whose physical make-up is hygienically sound.

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CHAPTER VI

CHILDREN'S INTERESTS IN READING

Children's interests as a guide in organizing subject matter. School men have long been aware that much time and effort are wasted in reading classes because of poorly selected subject matter. It behooves the student of the reorganization of reading, therefore, to become more skillful in the choice of subject matter than his predecessors have been. One of the guides to successful reading selections is derived from the study of children's interests. The question is, What are children's interests? In order to answer this question, this chapter presents evidence drawn from teachers and pupils, together with analyses of both unsatisfactory and satisfactory reading materials.

Measuring interests by pupils' ability to recall favorite selections. Until recently, investigations of children's interests in reading were characterized by narrowness of scope and lack of adequate statistical care. Wissler's investigation [1] is one of the best of the early studies. He obtained from the pupils of "a number of superintendents in Indiana" written responses upon the following points:

1. Write the subjects of all the lessons that you remember from the reader you used last year.
2. Which one did you like best? What was it that you liked?
3. If you were taken to a book store and told that you might select just one book for your own, what would you take?

[1] Wissler, Clark. Interests of Children in the Reading Work of the Elementary Schools. *Pedagogical Seminary*, V, 523–540. 1898.

Usable replies were received from 1950 children, 1060 boys and 890 girls, of third reader grade or above.

The success of Wissler's investigation depended upon the pupils' ability to recall the names of what they had read. Although this ability is only a rough measure of the success of the selections, it is probably one source of the names of favorite selections. There is, of course, the danger that a pupil will have been greatly impressed by an unsatisfactory selection and will, in his effort to make some kind of response, name an unpopular selection. Furthermore, the emphasis given by teachers to certain selections might cause pupils to recall selections which are outstanding, not because of interest in them, but solely because of the emphasis. Finally, all the pupils were limited in points 1 and 2 to the selections contained in one series of readers.

The need for caution in the interpretation of the results of this investigation is illustrated by the varying percentages of children who showed interest in certain types of selections in different grades. For example, when children from eleven to thirteen years of age are compared as to interests with children of thirteen to fifteen, this study indicates that children at the earlier age have great interest in stories of *heroism* and *adventure* and little interest in *moral precepts* or *description*, while children of the later age, thirteen to fifteen, show a complete reversal. These instances show the danger of following Wissler's results literally, because it is now known that children of both these ages and of years preceding and following are interested in *heroism* and *adventure*, and that "pure description" and moral precepts are uninteresting to most persons throughout the elementary and high schools. The books which children selected for purchasing indicate more than anything else a limitation which still exists: children's

acquaintance with books extends only in the slightest degree beyond school textbooks and fiction.

Finding out the elemental interests of children. Miss Dunn's investigation. In 1921 Miss Dunn reported the results of her investigation of children's interests in reading.[1] Miss Dunn's investigation was conducted in the belief that "it is essential that education be so organized as to utilize existing interests and develop those which are potential." [2]

In order to discover what the existing interests are, she analyzed the primary reading material of the present day and of the past, and then chose thirty-one representative selections from primary readers to present to children of Grades I to III. Before the testing with children was begun, these selections were carefully classified as to their elemental qualities. The elemental qualities for the testing of which the samples were selected are *child characters*, *adult characters*, *boy the central figure*, *girl the central figure*, *realistic*, *historical*, *geographical*, *fairy stories*, *myth*, *folk stories*, *fables*, and *fanciful*. The samples chosen for the experiment are catalogued in Table XIX.

These thirty-one samples were arranged in pairs in such order that certain qualities of likeness and difference existed between each pair of specimens. The first and second samples, the second and third, the third and fourth, and so on to the thirtieth and thirty-first were paired in reading them to children. In reading the first and second, for example, *How the Horses of the Sun Ran Away* and *Proserpina*, "a mythical story about a boy and a story of a similar origin about a girl would be compared. When two was compared with three, *Bessie Brandon's Guest*, a girl was the central character in each, but one story was mythical and

[1] Dunn, F. W. *Interest Factors in Primary Reading Material.* Columbia University, 1921.

[2] *Op. cit.*, p. 1.

TABLE XIX

Primary Reading Selections Used by Miss Dunn to Discover Children's Interests in Reading.[1]

Sample No.	Title	Key-word
1	How the Horses of the Sun Ran Away	Sun
2	Prosperina	Pros
3	Bessie Brandon's Guest	Bess
4	King Alfred and the Cakes	King
5	Candle Making at the Coolidges'	Candle
6	A Chinese School	School
7	Boys and Girls of Holland	Hol
8	The Pygmies	Pyg
9	East of the Sun and West of the Moon	East
10	Boots and His Brothers	Boots
11	One Eye, Two Eyes, and Three Eyes	One Eye
12	The Queen Bee	Bee
13	The Honest Woodcutter	Honest
14	The Lion and the Mouse	Lion
15	The Miller, His Son and Their Donkey	Miller
16	A Story of Washington's Boyhood	Colt
17	Dumpy the Pony	Dumpy
18	Fiddle Diddle Dee	Fiddle
19	Daisies, *Sherman*	Daisies
20	The Swing, *Stevenson*	Swing
21	One, Two, Three, *Bunner*	1, 2, 3
22	The Water Dolly	Dolly
23	Epaminondas	Epam
24	The Husband Who Kept House	Man
25	The Three Wishes	Wish
26	The Three Billy Goats Gruff	Gruff
27	The Johnny Cake	Cakes
28	The Wolf and the Seven Kids	Kid
29	The Old Woman and Her Pig	Pig
30	Mother Hubbard and Her Dog	Dog
31	The Jumblies, *Lear*	Jumb

the other assumed to be historical." Ten additional pairs of samples were formed in order to check the accuracy of the test.

[1] *Op. cit.*, p. 23.

"In general, one-half hour was spent in each classroom, during which two pairs of samples were read. In a few schools, all the samples were read, using half an hour a day for about two weeks. The reader began by giving the name of the story, and writing on the board some short significant part of the title to stand for it. The abbreviations thus used, which were constant for all the tests, are shown (Table XIX) under the heading Key-word. After reading one sample, the other member of its pair was similarly presented, *i.e.*, its title was given, its key-word written on the board, and the selection was read."

The pupils were then asked to write on a "vote slip" their names and the key-word for the sample which was their choice. The other pairs of samples were treated in the same way. In order to avoid a position error which early manifested itself, each pair of samples was read equally often in reverse and in natural order.

After subjecting her data to exacting statistical treatment, Miss Dunn concluded that the characteristics which arouse interest are "*surprise* and *plot* for both sexes, *animalness* for boys, and *childness*, *familiar experience*, and to a lesser extent *repetition* and *conversation* for girls. It is significant that the interest value of *surprise* outranks that of *plot*, since thereby a large amount of factual material, lacking the story element, but abounding in elements of wonder and unexpectedness, is of promise as affording interesting reading matter for primary children. That *childness* only slightly adds to the interest for boys means, conversely, that selections dealing with adult characters will appeal to them as much as incidents dealing with children." *Liveliness*, *fancifulness*, and *verse form* were found to add to interest only when accompanied by such qualities as *surprise*, *plot*, *childness*, *animalness*, or *familiar experience*.

"Generalizations as to *humor* are particularly difficult, since humor as the child sees it and humor to the adult mind are not one and the same. Children laugh at funny mishaps, but are often baffled by the hidden meanings or by the subtle turns of expression and thought that make humor for the adult. A case in point is the story of *Epaminondas and His Auntie.* Said a teacher, 'I never liked the ending of that story. I don't believe any of the children see the point, when the mother says, "You be careful how you step on those pies," and the story goes on to say, "And Epaminondas was careful. He stepped right in the middle of each pie." ' A small girl four years old being told this story, laughed loudly throughout it. Two weeks later, on the story-teller's next visit, she begged for it again. The same thing occurred at intervals of two weeks for about three months. Each time she laughed, but the laughter was less genuine, more forced. Finally she burst forth, 'I don't see a grain of sense in that story. Every time he did what his mother told him to, and every time she scolded him for it.' She had missed the point of the story; her laughter had been for the butter running into the boy's face and down his neck, the loaf of bread trailing in the dust, the puppy dog cooled and cooled in the spring." [1]

"Throughout this investigation nothing has been found which, from the standpoint of interest, warrants the highly partial selection at present characteristic of primary readers. Nothing here indicates that the child is in an 'age of pure fancy' nor that legends and folk tales as a class are the most interesting of all possible material for primary pupils. As for poetry, the evidence is all against, rather than for, its very large proportion in primary reading material. Instead of this limited range of liking, a child's tastes appear rather catholic. Give him a few important elemental qualities which may enter into fact or fiction, into prose or verse, into real or fanciful situations, and he is attracted and pleased." [2]

[1] Dunn, *op. cit.*, pp. 46–48.

[2] *Op. cit.*, p. 49.

"Interest, in fine, offers no obstacle to an all-round selection of primary reading material. The qualities which are important as factors of interest may, by skillful authorship, be embodied in almost any class of reading material. What is needed is this skillful treatment of fields hitherto neglected or taboo in primary reading books, together with wise and balanced selection among the enormous amount of matter already in existence in more favored classes of material." [1]

Children's interests as a measure of the success of elementary school reading material. ***a.*** **Plan of an investigation of children's interests.** In pursuing the investigation of reading content referred to in Chapter IV,[2] the following outline of procedure was used in obtaining the reactions from teachers and pupils to reading materials:

1. Reactions to basal reading matter
   - *a.* From teachers
     - Questionnaire I: Analytical questions on the content of basal readers
     - Questionnaire II: Classified lists of titles of selections sent to teachers for their comments
   - *b.* From pupils
     - Representative selections presented directly to pupils
     - Pupils' interest in the selections measured by asking them to state whether they liked or disliked each selection and why
2. Reactions to new informational literature
   - *a.* From teachers
     - Questionnaire sent to teachers who had used this literature

[1] *Op. cit.*, p. 50. [2] Uhl, W. L. *Scientific Determination of the Content of the Elementary School Course in Reading.* University of Wisconsin, 1921.

b. From pupils
Informational selections presented to pupils with the request that they state whether they liked or disliked them and why [1]

An attempt was made so to present the first questionnaire that teachers would judge both the grading and the general character of the selections reported on. In order to keep the teachers within the bounds of their actual experience and yet give them a fairly free hand in naming selections, they were asked to report on the readers most used in their grades. The second questionnaire was based largely on the results of the first. It consisted of titles of selections arranged in lists of about fifty for each of the eight grades. In order to obtain a uniform terminology, a descriptive list of desirable and undesirable terms used in the responses to Questionnaire I was included with the directions for judging the selections.

The choice of the selections submitted in the second questionnaire was determined on the basis of several considerations. Although close agreement existed in Questionnaire I upon certain selections, there was either disagreement or a paucity of responses upon other widely used selections. The second questionnaire was planned, therefore, with a view to obtaining (1) confirmatory evidence upon certain selections which the earlier questionnaire had indicated as either desirable or undesirable — the lists were not as representative of inferior as of superior selections, (2) more ample comments upon selections regarding which the responses to Questionnaire I were divided, and (3) judgments upon standard selections which were seldom or never mentioned in Questionnaire I. The

[1] Uhl, *op. cit.*, p. 9. This investigation was begun in 1915 and completed in 1919.

descriptive list of qualities which accompanied this questionnaire follows:

Desirable Qualities

1. *Interesting* — because of *humor; variety* of style or material; *dramatic* element, that is, exciting; *interesting action*, though not exciting; *interesting repetition* as in tales for lower grades; portrayal of *home life* or *child life; personification; interesting characters* described or taking part in action; *interesting problems* for class discussion; or because the story is *well told.*

2. Within grasp — because of the *familiar subject matter*, the *diction*, the *form of expression*, or *easy content.*

3. A story of *adventure, knighthood, romance,* or *heroism.*

4. A valuable lesson for your grade — because it *cultivates expression* in oral reading; *enlarges vocabulary* by giving new words which are within grasp of the pupil; *stimulates thought* on account of *interesting information* or *character study;* presents *good moral* teaching; stimulates *imagination.*

5. *Rhythm* or *rhyme particularly attractive* or because your pupils *like rhythm or rhyme.* (State which.)

6. *Festival element* as in Christmas selections.

7. *Nature* — the selection is good for use in nature study.

8. *Dramatization* — appropriate for dramatizing.

9. *Animal play* or *about animals.*

10. *Fairy element, magic,* or *supernatural.*

11. *Faithfulness, kindness,* or *sympathy* portrayed.

Undesirable Qualities

1. *Too mature* — because of *hard words, hard or unfamiliar subject matter, too abstract* material, *hard symbolism.*

2. *Uninteresting* — because it has *no story;* too much *repetition;* is *too long; not well told, unreal; too childish; monotonous;* because *poetry is disliked* by your pupils; pupils are *tired of it; scrappy* — not enough of the story is told; *characters disliked;* or *too didactic.*

3. *Moral teaching bad* or *moral too obvious.*

4. *Too sad* or *too depressing* for pupils to enjoy.[1]

Up to this point in the investigation, all the judgments and tests dealt with traditional literature. As a result very few informational selections were mentioned. Instead, the selections mentioned were characterized by teachers as possessing literary style and general appeal. Present-day interest in informational material led to an inquiry into pupils' interests in such literature and the results attained by using it.

The material in this test was drawn from a set of informational selections published by the United States Bureau of Education in the *Community and National Life Series.*[2] Fifty-nine teachers who had used the selections in this form were asked to state their opinions of them. In addition to the judgments of teachers, pupils' judgments were obtained as described in Chapter IV upon both standard reading selections and samples from the *Community Life Series.* The method of using this informational material with the eighty-two seventh- and eighth-grade pupils of School A who reported upon it consisted simply of having the pupils read it silently and then state in writing whether or not they liked it and why.

[1] *Op. cit.*, pp. 12–14.

[2] Judd, C. H., and Marshall, L. C. Community Leaflet No. 18, March 1, 1918. Bureau of Education, Washington, D. C. The selections used are the following: "Before Coins Were Made," by Katherine McLaughlin; "Minting of Coins" and "Paper Money," by Ruth Reticker; and "Money in the Community and the Home," by Edwin A. Kirkpatrick.

b. **The participants in the investigation.** Table XX shows the number and distribution of teachers who responded to the first and second questionnaires. Twenty-five states and the District of Columbia responded to the first questionnaire, and sixteen states and the District of Columbia to the second.

TABLE XX

The Number and Distribution of the Teachers Who Responded to the Questionnaires

Questionnaire I

Grades . . .	I	II	III	IV	V	VI	VII	VIII	Total
Cities	40	75	72	80	67	55	70	68	80
Teachers . .	184	361	327	376	327	185	261	232	2253

Questionnaire II

Cities	46	48	47	46	48	43	44	46	49
Teachers . .	95	98	93	93	100	87	87	88	741

The responses from teachers and pupils provided an extensive array of descriptive terms used for characterizing the thousands of selections which they judged. In response to the first questionnaire, teachers used any terms which they happened to choose; to the second, their responses were limited to the defined terms included among the directions sent with that questionnaire. Pupils' use of terms was restricted only by the selections presented to them and by the terms at their disposal.

c. **The findings.** At the beginning of this chapter, the following question was asked: What are children's interests? An answer to this question will be given in the following pages in terms of the qualities of representative reading selections. Also, reading material will be discussed in the

light of the reactions of teachers and pupils to it. In order to make the answer the more adequate, both desirable and undesirable qualities and selections are discussed.

TABLE XXI

The Relative Frequencies of the Most Important Undesirable Qualities in the Teachers' Responses to Questionnaires I and II *

Qualities	Questionnaire	Grades							
		I	II	III	IV	V	VI	VII	VIII
Too mature	I	60	60	61	62	65	65	66	73
	II	25	28	30	30	28	28	28	28
Hard words	I	15	13	11	10	10	11	11	9
	II	13	15	18	19	18	14	10	8
Unfamiliar subject matter	I	6	5	5	4	4	4	4	4
	II	6	9	10	10	11	11	10	9
Abstract or hard symbolism	I	1	2	3	4	3	3	2	2
	II	9	10	12	16	17	18	17	19
No story, lacks action	I	5	6	6	6	6	5	5	2
	II	6	4	2	2	3	3	3	3
Unreal	I	2	3	3	3	3	2	2	1
	II	6	4	4	3	3	3	3	3
Too long	I	2	2	2	2	2	3	3	3
	II	8	6	5	5	4	4	4	4
Scrappy	I	2	1	1	1	1	1	1	1
	II	1	1	1	1	1	1	1	1
Too sad	I	1	1	2	1	1	1	2	3
	II	3	4	3	5	5	7	10	13
Too childish	I	2	2	2	3	2	2	1	1
	II	6	6	5	3	5	7	10	10
Tired of it	I	1	1	1	1	1	1	1	1
	II	3	4	4	3	3	2	2	1
Monotonous	I	2	2	1	1	1	1	1	—
	II	13	8	5	2	1	1	1	1
Not well told	I	1	2	2	2	1	1	1	—
	II	1	1	1	1	1	1	1	—

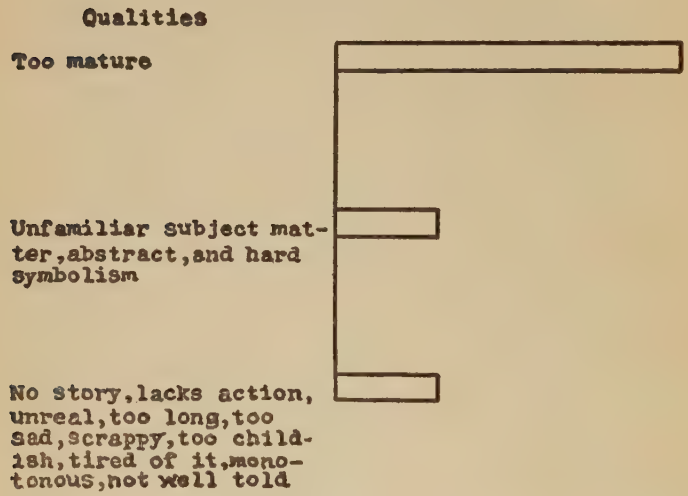
* The relative frequencies were derived by using the sums of the frequencies of these qualities for each of the grades as divisors and the frequencies of the respective qualities as bases.

1. Undesirable qualities of reading selections. Table XXI shows the names and percentages of frequency of the most important undesirable qualities mentioned by teachers in response to Questionnaires I and II. The table is to be interpreted thus: *too mature* has a percentage of 60 for Questionnaire I because of all the names of qualities mentioned by teachers 60 per cent referred to the quality *too mature;* the percentages for the qualities total one hundred for each questionnaire in each grade. The term *too mature* occurs less frequently in the second questionnaire than in the first, because the teachers in responding to the second stated the reasons for over-maturity by using such terms as *unfamiliar subject matter, abstract,* or *hard symbolism.*

In addition to the undesirable qualities listed in Table XXI teachers used also the following terms: *dislike of poetry, lack of content, bad moral teaching, characters disliked,* and *too didactic. Dislike of poetry* is omitted from the table because evidence from the pupils themselves shows clearly that the popular notion about this dislike is based upon children's dislike either of certain poems or of poems which are not well taught. The term *lacking in content* was employed by ten teachers who reported upon the use of one series of readers in Grades I and II. The terms, *bad moral teaching, characters disliked,* and *too didactic* were seldom used and never more than twice in the comments upon any one selection. Some of the terms included in Table XXI were not common in the responses to the first questionnaire, but recurred frequently when suggested to teachers in the second. For example, sixteen teachers reported that *The Wreck of the Hesperus* is *too sad* in Grade III; many teachers reported similarly upon the use of *The Prisoner of Chillon, The Fall of the House of Usher,* and *Thanatopsis* in the later grades. The terms *not well told* and *scrappy* were applied to a few selections to indicate that teachers are appreciative of the

literary character of reading selections; *scrappy* was used only in comments upon selections contained in old and obsolescent series of readers and refers to such excerpts from larger works as were formerly included in readers.

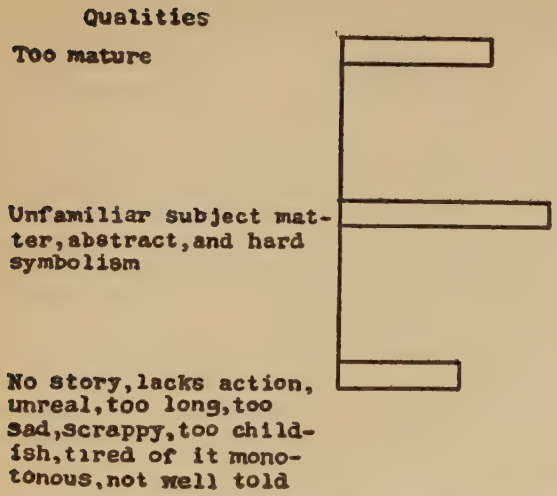
DIAGRAM IV


Qualities
Too mature
Unfamiliar subject matter, abstract, and hard symbolism
No story, lacks action, unreal, too long, too sad, scrappy, too childish, tired of it, monotonous, not well told

The relative frequencies of the most important undesirable qualities in Questionnaire I. Combinations are here made in order to emphasize the frequency of the use of terms denoting over-maturity of subject matter.

Diagrams IV and V show graphically the data of Table XXI. The diagrams emphasize the prevalence of over-difficult subject matter in readers. Closely related to over-maturity of subject matter is the pupils' unfamiliarity with it and its abstract and symbolical character. For example, teachers criticize adversely *Paul Revere's Ride* for use in Grade IV because of its *unfamiliar subject matter;* this difficulty is a result of attempting to use material far

DIAGRAM V


Qualities
Too mature
Unfamiliar subject matter, abstract, and hard symbolism
No story, lacks action, unreal, too long, too sad, scrappy, too childish, tired of it monotonous, not well told

The relative frequencies of the most important undesirable qualities in Questionnaire II. Combinations are made as in Diagram I.

in advance of the children's work in United States history. Similar comments may be applied to the use of either *The Prisoner of Chillon* or *Marmion and Douglas* in the intermediate grades.

At the other extreme are a few selections which are said to be *too childish*. Such selections vary in number from grade to grade, but there are about as many for Grade I as for Grade VIII. The most common cause for this criticism is the duplication of the content of readers used in different grades. Pupils are often alleged to be " tired of " selections; certain selections are doubly unfortunate in that respect; *The Pied Piper of Hamelin* and *Hiawatha*, for example, not only appear in many readers, but are rendered in various versions so that when the poems are finally

used in their original forms, many pupils are already tired of them.

No story. The terms *no story* and *lacks action* are elicited from both teachers and pupils in the case of such selections as Gray's *Elegy*, *The Chambered Nautilus*, and *Abou Ben Adhem*. Pupils' additional comments about *Abou Ben Adhem* include the following (Grades VII and VIII, School A); "too serious," "dry," "not much adventure and exciting things." Similar comment occurs in pupils' statements about *The Chambered Nautilus:* "I can see no scheme or story in this although the descriptions are beautiful," and "dislike because not adventurous."

The term *unreal*, although used by many teachers, was seldom ascribed to any one selection. Two selections, however, *Baron Munchausen* and *The Fall of the House of Usher*, were thus criticized by teachers, although children find the Munchausen tales interesting just because they are "nonsensical," "untrue," or "impossible."

2. Desirable qualities of reading selections. Table XXII shows the relative frequencies of qualities which seem to be the determinants of children's interests in reading selections. This table is read in the same way as Table XXI. These qualities have been selected from the total list of desirable qualities given in Table XXIII. Although some of the qualities included in Table XXII occur no oftener than others which are omitted, the presence of these terms in the comments upon practically every desirable selection indicates that these underlie interest. This statement is not meant to imply that other qualities are unimportant, but that other qualities apart from those of Table XXII seldom if ever characterize an interesting selection. For example, a selection with excellent diction may be referred to as "mere words"; or one having excellent moral teachings may be "too didactic" or have

TABLE XXII

The Relative Frequencies of the Most Important Desirable Qualities Based Upon the Judgments of Teachers Who Responded to Both Questionnaires

Qualities	Questionnaire	Grades							
		I	II	III	IV	V	VI	VII	VIII
Dramatic action, adventure, and heroic . . .	I	7	9	15	20	23	23	19	19
	II	14	19	23	27	28	28	28	28
Interesting action (not dramatic)	I	8	8	9	10	10	9	11	14
	II	11	11	9	9	8	10	11	12
Humor	I	10	13	11	9	9	12	14	10
	II	7	6	6	7	8	10	11	10
Fairy and supernatural . . .	I	7	7	8	7	6	5	3	2
	II	9	13	13	14	11	9	5	5
Interesting characters, home life, or child life	I	16	12	13	13	16	14	19	13
	II	7	6	8	12	14	14	13	13
Interesting problems and character study . .	I	8	7	6	6	7	10	14	20
	II	3	5	7	8	10	11	13	14
Kindness and faithfulness . .	I	6	8	10	9	8	6	4	4
	II	8	9	10	10	10	8	9	8
About animals, animal play, or personification .	I	13	14	9	8	7	4	2	1
	II	16	13	10	6	5	3	3	3
Dramatization, availability for	I	13	10	7	6	5	3	2	2
	II	10	8	7	4	3	3	3	3
Interesting repetition . .	I	5	3	1	—	—	—	—	—
	II	14	9	5	1	1	1	1	1
Interesting information .	I	7	9	11	12	9	14	12	15
	II	1	1	2	2	2	3	3	3

"too obvious" a moral. If, instead of using didactic qualities as criteria for judging a *standard* reading selection, one considers the qualities of Table XXII as underlying causes of interest, the moral and other important values

TABLE XXIII

Complete List of Terms Used by Teachers to Designate Desirable Qualities in Reading Selections

Group I. Qualities Which Make a Selection Intrinsically Interesting

Interesting action	Heroism
Interesting characters	Romance
Interesting problems	Knighthood
Interesting information	Kindness
Interesting repetition	Nature
Humor	Dramatization
Home life	Personification
Child life	About animals or animal play
Character study	Fairy element or supernatural
Dramatic action (exciting)	Festival element

Group II. Qualities Commonly Mentioned in Connection with Desirable Results of Teaching

Morality	Stimulation of thought
Patriotism	Cultivation of expression
Cultivation of imagination	Enlargement of vocabulary

Group III. Qualities Which Are Dependent upon Literary Style

Well told	Diction easy
Rhyme	Content easy
Rhythm	Variety
Familiar subject matter	

will, teachers contend, be more impressively cared for than if purely didactic qualities become the prime consideration. In answer to the possible objection that the qualities here regarded as determinants merely aid in teaching or cater to the superficial desires of pupils it may be said, first, that no critics of reading matter object to the presence of any of these qualities and, second, that a careful study shows that the finest examples of literary achievement abound with these characteristics rather than with merely formal qualities. The determinants refer then to attributes of good literature and, at the same time, to attributes of content by means of which didactic or other formal re-

sults may be most readily attained. In judging new material proposed for use in reading, didactic qualities as well as these would of course require consideration.

DIAGRAM VI

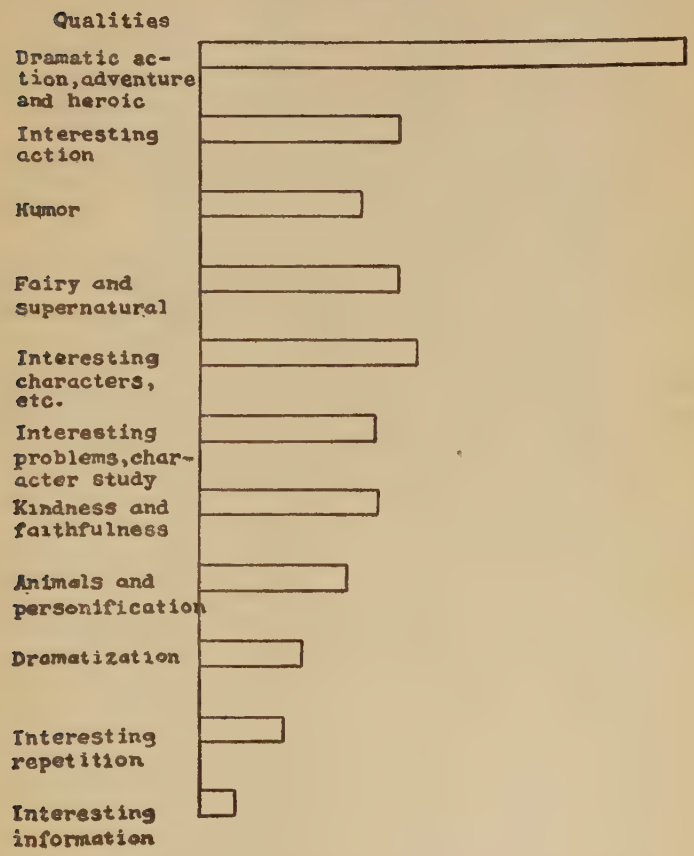


Diagram VI exhibits graphically the relative importance of these determinants of children's interests. The high per-

DIAGRAM VII

The Shifting of Ranks of the Most Important Desirable Qualities in Different Grades

(The table as read from left to right indicates that *dramatic action* has the highest frequency of these qualities in all the grades except the first, and so on.)

Grade I

About animals, etc.	Dramatic action, etc.	Interesting repetition	Interesting action	Dramatization	Fairy and supernatural	Kindness and faithfulness	Humor	Interesting characters	Interesting problems	Interesting information

Grade II

Dramatic action	About animals, etc.	Fairy and supernatural	Interesting action	Interesting repetition	Kindness and faithfulness	Dramatization	Humor	Interesting characters	Interesting problems	Interesting information

Grade III

Dramatic action	Fairy and supernatural	About animals, etc.	Kindness and faithfulness	Interesting action	Interesting characters	Dramatization	Interesting problems	Humor	Interesting repetition	Interesting information

Grade IV

Dramatic action	Fairy and supernatural	Interesting characters	Kindness and faithfulness	Interesting action	Interesting problems	Humor	About animals, etc.	Dramatization	Interesting information	Interesting repetition

DIAGRAM VII — *Continued*

Grade V

Dramatic action	Interesting characters	Fairy and supernatural	Kindness and faithfulness	Interesting problems	Interesting action	Humor	About animals, etc.	Dramatization	Interesting information	Interesting repetition

Grade VI

Dramatic action	Interesting characters	Interesting problems	Interesting action	Humor	Fairy and supernatural	Kindness and faithfulness	About animals, etc.	Dramatization	Interesting information	Interesting repetition

Grade VII

Dramatic action	Interesting characters	Interesting problems	Interesting action	Humor	Kindness and faithfulness	Fairy and supernatural	About animals, etc.	Dramatization	Interesting information	Interesting repetition

Grade VIII

Dramatic action	Interesting problems	Interesting characters	Interesting action	Humor	Kindness and faithfulness	Fairy and supernatural	About animals, etc.	Dramatization	Interesting information	Interesting repetition

centage of teachers naming each of these qualities when judging a large and representative group of selections gives value to the relative frequencies shown in this diagram. The diagram emphasizes the importance of providing reading selections which portray action of a dramatic or otherwise interesting character.

Diagram VII shows the shifting of interest from grade to grade. *Interesting repetition*, for example, passes from third place in importance in Grade I to fifth in Grade II; thence to the last place, where it remains. In contrast with the course of *interesting repetition* is that of *interesting problems*, which shifts from next to the last place in Grade I to the second place in Grade VIII. This contrast can be accounted for by the fact that while cumulative tales with their interesting repetition are used only in the lower grades, the subject matter of all grades admits of raising interesting problems, as, for example, questions dealing with character study. The data show, therefore, that with the subject matter now in use, the relative importance of underlying qualities of interest varies from grade to grade, although the extent to which this variation is due to the character of the subject matter now used is not shown.

Interesting action is the best guarantee of success for a reading selection; the action may be simple and non-dramatic or of a dramatic or adventurous type. Among the most successful selections are many which exemplify both types of action, as *The Pied Piper of Hamelin*, and *Dick Whittington and His Cat*. The frequency of terms which can be subsumed under *interesting action* suggests that if a selection does not portray action the teacher must greatly enliven the selection in order to make it successful. Furthermore, this quality is often accompanied by other desirable qualities such as *interesting characters*, *home* and *child life* as in *Cosette*, *Dick Whittington*, and *How Cedric*

Became a Knight. The success of these selections attests the desirability of such combinations of appeal.

In the early grades, stories of animal play are favorites. Such stories are supplanted in the intermediate grades by *Black Beauty*, *Patrasche the Dog of Flanders*, and the like. Although these stories are favorites, too few of them appear in the readers used in the later grades to give the quality *about animals* a high frequency.

Dramatization has an important place throughout the grades. Such selections as *The Pied Piper*, *The Courtship of Miles Standish*, and *The Merchant of Venice*, are among those frequently mentioned as available for dramatization in the intermediate and upper grades.

Stories with a supernatural background appear throughout the grades. Such stories as *The Shoemaker and the Elves* and *Rip Van Winkle* illustrate favorite types for early and late grades. As both of these stories are favorites at the lower and upper ends of the elementary school, we can conclude that interest in fairy tales does not end with the passing of the intermediate grades, provided the supernatural element is given a proper setting. Indeed a high percentage of grammar-grade pupils profess to enjoy the tale of *Aladdin and His Wonderful Lamp.*

Kindness, *faithfulness*, and *loyalty* often enhance the interest of children in selections which are favorites even apart from these qualities. For example, the animal life and child life in *Patrasche* and *Cosette* would interest children, although teachers assert that interest is greater in these selections because of the faithfulness of the dog Patrasche and the " stranger's " kindness to Cosette.

Humor is an important quality throughout the grades; only occasionally do both teachers and pupils look askance at material which exemplifies this quality. Such persons either contend that there is nothing humorous in such

selections as *The Wonderful One-hoss Shay* and *Adventures of Baron Munchausen*, or else regard them as "silly."

Although older reading selections which contain informational material are especially unfortunate in all grades, there is no evidence that well-graded informational material is not interesting. Indeed, the popularity of the *Community Life Leaflets* is as great as that of any other selections upon which data have been collected. The quality *interesting information* has importance also in such selections as *The Leak in the Dike;* teachers supply additional information about Holland and report that they succeed very well so far as interest is concerned.

Among qualities mentioned in connection with desirable results of teaching, the quality *morality* leads in all grades, while the development of imagination holds either the second or the third rank. Nearly all selections are used for teaching morality and developing imagination. When these data are considered with reference to the original statements of pupils, it appears that there is not an overuse of the story with a moral, but rather that there is an attempt to provide material which will give desirable emotional settings for morality without making the moral too obtrusive. Statements supporting this deduction are found in many of the responses: as already stated, some selections teach morality "without seeming to do so." *Patriotism* is exemplified by so few selections that its importance cannot be determined from its frequency in the tables.

The recent tendency to emphasize silent reading is not reflected in the responses to either questionnaire. The term *cultivation of expression* refers to expressive reading and the term *stimulation of thought* to promotion of class discussion. The interpretation of material read is emphasized more by the incidental comments than by the responses tabulated under *stimulation of thought.* Many selections

are used for the purpose of stimulating thought upon important topics.

Although the enlargement of the vocabulary is an important result of teaching, it is not mentioned as a specific value of many selections. It is, however, frequently mentioned in connection with selections about which there are other comments. For example, *Rip Van Winkle* and *The Legend of Sleepy Hollow*, which are very popular selections, are regarded as having great value in this respect.

The overwhelming evidence that many selections are too difficult for the grades in which they are taught is in agreement with the evidence that many other selections are regarded as effective particularly because they are within the mental grasp of the pupils who study them. This fact shows at least that teachers desire material which increases interest instead of material which needs so much explanation that interest is lost by the time the meaning is mastered or the words correctly pronounced.

Although there are differences between the incidental qualities named by children and those named by teachers, a very high correlation exists between pupils' and teachers' mentioning of the qualities which have been referred to as the determinants of interest.[1]

3. Reading selections which should be eliminated from the course of study. The practical value of discovering children's interests in reading selections lies chiefly in the application of a knowledge of those interests to the choice and organization of subject matter. In order so to apply this knowledge, one needs not only the names of qualities of interest, but also the judgments of teachers and pupils upon many selections which are now included in many textbooks. Such judgments were, of course, often obtained from teachers by means of the questionnaires under discussion.

[1] There is a correlation of .87 by the Pearson formula.

TABLE XXIV

Selections Which Teachers Say Should Be Avoided

Selections	Questionnaire	Grade	Number of Judgments	Per Cent Unfavorable
Rose, Daisy, and Lily	I	I	15	100
The White Lily	I	I	17	88
A Clever Jackal	I	I	11	73
	II	I	41	20
The House That Jack Built	I	I	8	89
	II	I	52	21
An Evening at Home	I	II	36	100
My Nephew Philip	I	II	19	100
Blanche and Her Aunt	I	II	16	100
Discontent	I	II	28	96
The Little Brook	I	II	33	94
The Leaf's Journey	I	II	29	89
Ulysses and the Bag of Winds	I	II	14	93
Ama the Sun Fairy	I	II	10	90
Sweet and Low	I	II	10	90
	II	II	66	14
The Maple	I	III	22	100
The Crow	I	III	16	100
The Crab and the Moon	I	III	15	100
The Cricket on the Hearth	I	III	12	100
	II	III	29	45
	II	IV	32	59
	II	VI	32	34
	II	VII	22	38
	II	VIII	29	7
The Flying Trunk	I	III	40	97
	II	III	31	23
The Mad Tea Party	I	III	21	95
The Wind and the Moon	I	III	20	95
The Czar and the Angel	I	III	34	88
The Factory Boy	I	IV	22	100
Duty	I	IV	16	100
Language	I	IV	15	100
The Argonauts	I	IV	48	96
The Whistle (Original version)	I	IV	25	96
	I	V	12	100

TABLE XXIV—*Continued*

Selections	Questionnaire	Grade	Number of Judgments	Per Cent Unfavorable
Baron Munchausen Tales	I	IV	37	95
	II	IV	24	46
	II	V	33	30
	II	VI	29	31
Little Nell	I	IV	20	95
The Last Lesson in French	I	IV	18	95
	II	IV	31	42
Boyhood in the South	I	IV	36	94
The Declaration of Independence	I	IV	21	86
Industry	I	V	27	100
The Blessings of Poverty	I	V	20	100
Lying	I	V	15	100
Sleep	I	V	13	100
Glimpses of the Great Commoner	I	V	19	100
The Fairyland of Science	I	V	9	100
	I	VI	10	90
Nuremburg	I	V	31	97
	II	V	23	83
Titania and Oberon	I	V	44	96
	II	V	23	48
Capturing the Wild Horse	I	V	25	96
Good Books	I	VI	12	100
Something about Books	I	VI	10	100
Education	I	VI	9	100
The Highest Aristocracy	I	VI	13	92
The Contest between the Man and the Cannon	I	VI	11	91
The Death of Socrates	I	VI	11	90
Gray's Elegy	I	VI	9	89
	II	VI	40	82
	II	VII	43	49
	I	VIII	18	47
	II	VIII	43	56
Cranford (Selections)	I	VI	9	89
	II	VI	21	33
	II	VII	23	30
Early Conquests	I	VII	19	100

TABLE XXIV — *Continued*

Selections	Questionnaire	Grade	Number of Judgments	Per Cent Unfavorable
The Island of the Fay	I	VII	19	100
Wealth	I	VII	16	100
What a Good History Should Contain	I	VII	15	100
The Character of Columbus . .	I	VII	15	100
The Character of Washington . .	I	VII	14	100
The Fall of the House of Usher .	I	VII	13	100
	II	VII	23	65
	II	VIII	26	54
What Constitutes a State . . .	I	VII	12	100
	II	VII	34	26
Genius and Industry	I	VII	12	100
The Moral Rights of Animals . .	I	VII	12	100
The Renunciation of Wisdom . .	I	VIII	15	100
Wisdom and Prudence	I	VIII	11	100
Immutable Justice	I	VIII	9	100
Munera Pulveris	I	VIII	19	95
Thanatopsis	I	VIII	21	86
	II	VII	44	64
	II	VIII	47	43
The Descent into the Maelstrom .	I	VIII	47	47
	II	VIII	27	7
L'Allegro	I	VIII	8	100
	II	VIII	28	64

Table XXIV contains a list of selections which, according to teachers, exemplify what is to be avoided. Owing to the fact that in the first questionnaire teachers were at liberty to name any selection in the readers used in their schools, hundreds of possible selections were available for judging. Consequently, a large number of judgments upon a given selection was unlikely to be obtained unless it were notably inferior or superior. Under these conditions, ten judgments upon a selection are significant. Of still greater significance is such a massing of adverse judgments as ap-

pear against such fifth-grade selections as *Boyhood in the South*, *Industry*, and *Nuremburg*. In the second questionnaire, which contained only about fifty selections for each grade, there was greater opportunity for a massing of judgments. Table XXV shows the percentages of unfavorable responses obtained from both teachers and pupils to certain selections.

TABLE XXV

Comparative Judgments of Teachers and Pupils Regarding Certain Selections Which Are Unsatisfactory in the Elementary School

(The percentages of unfavorable responses are shown for Questionnaire I, Questionnaire II, and Pupils)

Selections	Grades	Q I	Q II	Pupils
Phaëthon	III	75	14	35
	IV	—	3	39
Baron Munchausen	IV	95	46	—
	V	—	30	22
	VI	—	31	24
	VII	—	26	16
	VIII	—	—	16
What Constitutes a State	VI	—	—	69
	VII	—	26	56
	VIII	—	3	45
The Chambered Nautilus	V	—	70	—
	VI	—	—	69
	VII	82	17	66
	VIII	12	7	66
Abou Ben Adhem	IV	—	37	—
	V	—	11	48
	VI	50	—	47
	VII	—	—	45
	VIII	—	—	45
Excelsior	III	—	—	61
	IV	—	62	63
	V	—	40	62
	VI	—	—	53
	VII	—	12	31
	VIII	—	—	34

Before basing recommendations upon these results, it should be stated that Chapter X shows the possibilities of increasing the value of reading material by improving the methods of teaching; but one must distinguish between possibilities and probabilities. The data obtained from teachers show the probabilities. That is, representative and dependable teachers who have used these selections report a lack of success with them. In all probability, the majority of teachers have had even less success with these selections than the teachers who responded to these questionnaires. We have, therefore, on the one hand, an account of what superior teaching can accomplish, and on the other hand, an account of what teaching has accomplished. The persons who have the responsibility of organizing courses in reading and literature cannot afford to overlook the fact that only in exceptional cases do teachers interest their pupils in the selections named in Table XXIV. In order to show some of the outstanding reasons why these selections should be eliminated from courses of study, the following analyses of selections are presented.

4. Analyses of inferior reading selections. *The Whistle.* This story by Benjamin Franklin has for several generations, had a place in our readers and has even given rise to one of our popular sayings. This selection was mentioned unfavorably thirty-seven times in the first questionnaire for Grades IV and V, and favorably only once. Excepting two fifth-grade teachers who say that their pupils are tired of it, all refer only to its hard words and over-maturity. It is contained in substantially the same form so far as content is concerned in books four and five of two widely used series of readers and in the fifth book of another series published for use in a single state.

In looking for difficult words, one finds in a fifth-grade version the following expressions which might be new or

troublesome for many pupils: *directly*, *voluntary*, *vexation*, *reflection*, *chagrin*, *ambitious*, *court favor*, *sacrificing*, *levees*, *popularity*, *political bustles*, *benevolent*, *accumulation*, *man of pleasure*, *audible*, *corporeal*, *sensations*, *appearance*, *equipages*, and *contract debts*. In the version intended for Grade IV, only a few of these expressions remain: *directly* is changed to *at once; voluntary* is omitted; *reflection* is changed to *thought of it; chagrin* is changed to *shame; ambitious*, *sacrificing*, *court favor*, *levees*, *popularity*, and *political bustles* are avoided by omitting the sentences containing them; *accumulating* is changed to *heaping up*. The sentence reading, "When I see a man of pleasure, sacrificing every laudable improvement of mind or of his fortune, to mere corporeal sensations," etc., is changed to "When I see a man neglecting the improvement of his mind, wasting his fortune," etc. The remaining difficult expressions are avoided in the fourth-grade book by omitting two more sentences.

In the use of the fifth-grade selection, approximately twenty expressions would need explanation to pupils of that grade. Assuming that a few words should be added to the pupils' vocabulary, we might argue that this is not too long. Here, however, we meet with another difficulty, namely, the sentence structure. The second sentence of the fifth-grade version reads as follows: "I went directly to a shop where they sold toys for children, and being charmed with the sound of a whistle that I met by the way in the hands of another boy, I voluntarily offered and gave all my money for one." The fourth-grade version divides and otherwise simplifies this sentence. This involved style persists throughout the fifth-grade version.

Fifth-grade pupils are thus confronted with examples and applications drawn from adult life, by many difficult words, and many difficult sentence constructions. The

closest observers of pupils of this grade, namely, the teachers, assert that their pupils react unfavorably to this anecdote in its original form.

The Island of the Fay. Two selections of Poe appear among those which seventh-grade teachers find unsuitable for teaching purposes. The excerpt from *The Fall of the House of Usher* is referred to in every case in connection with one of the older series of readers. *The Island of the Fay* as found in one of the newer series of readers was mentioned by nineteen teachers, all of whom judged it adversely. The reasons given for such judgment are as follows: *lacks action, unreal, unfamiliar subject matter, hard words,* and *overmaturity.*

An analysis of this selection shows clearly the source of some of the difficulties with it. The demands made by it upon the imagination are great, although they are not beyond the powers of all pupils of Grade VII; as commonly taught, however, these demands are too great for most pupils, because such a selection requires either a careful assignment — such an assignment as cannot always be arranged, or else a well-conducted "study lesson." The pupil who without aid begins reading this passage is supposed to pass suddenly from his school world into a very unreal situation. Only those pupils who can readily follow a writer upon one of his "lonely journeyings amid a far distant region of mountain locked within mountain, and sad rivers and melancholy tarns writhing or sleeping within all" — only such pupils are able to place themselves in the attitude needed for the appreciation of the story. The brief introduction to the scene straightway described contains several phrases which are of slight if any significance to one who cannot readily imagine the appearance of hidden mountains, sad rivers, and writhing tarns. These references constitute for most pupils unfamiliar subject matter and

need more than mere explanatory treatment. Such explanatory treatment is probably necessary, but it needs to be supplemented or preceded by an emotional preparation. This emotional preparation would place the pupils in possession of an attitude which many of them may at some time in their lives have assumed while contemplating a situation similar in certain aspects to Poe's imaginary islet. The possibility of such a preparation is, it seems, a measure of the probable success of this selection with the average class, and can be judged by the supervisor. Several conditions may prevent teachers from providing such a preparation: lack of personal interest in the passage, lack of time for their own preparation or for presentation, or lack of ability to inspire interest in such a situation; also, it should be noted that the suggestions given in manuals for the teaching of such passages as this usually point only to the explanation of meanings.

Capturing the Wild Horse. Lack of movement might be named as another defect of the selection just analyzed. That the presence of movement does not, however, insure interest, is shown by an analysis of the fifth-grade selection entitled *Capturing the Wild Horse.*[1] This selection contains "action," is "well-told," and tells about a hunting expedition involving large game. Notwithstanding these desirable qualities, it is judged as an inferior teaching selection by 96 per cent of the teachers who mentioned it. The reasons assigned for such judgments are two: *hard words* and *over-maturity.* All the references to the tale applied to the version contained in one of the newer readers.

In criticizing this selection, we may analyze it and also compare it with successful ones. In the reader containing the selection, there is, immediately following it, a well-selected list of twenty-seven words for the study of pronun-

[1] From Washington Irving's *A Tour on the Prairies.*

ciation and an additional list of thirty-eight words and phrases for the study of meanings. The tale is approximately four pages in length. There is, therefore, according to the editor's judgment, an average of about twenty difficult words or phrases per page. Few, if any, sentences in the selection present less than one major difficulty. The words and phrases listed for special study vary in difficulty, but there are many which would tax severely an eighth-grade pupil.

The adventure recounted in this story is one in which only adults participate; no references to children are made in it. Besides, the adventure is not one about which fifth-grade children are likely to have clear notions. In contrast with favorite tales of adventure, the capture of a wild horse is very remote from the child's own thought and experience.

Many children have, however, contemplated a solitary existence in the midst of many natural and artificial goods such as surrounded Robinson Crusoe when he was shipwrecked on foreign seas. Crusoe's adventures are replete with the things children do or about which they have had many discussions and thoughts. The capturing of a wild horse might be made equally interesting by approaching it with a consideration of so interesting a project as getting wild horses for a circus or for riding. The selection as it stands does not, however, contain such references to a familiar background as run through the account of Robinson Crusoe.

The tale of the capture of the wild horse may be contrasted with another favorite tale, *The Story of Robin Hood*, which also appears in the reader containing the account of the wild horse. In spite of many difficult words or new words such as *abbey*, *jousts*, *Justiciar*, and *tryst*, *The Story of Robin Hood* is named as a favorite selection. Reasons

given for the popularity of this story are that it portrays adventure involving the child life of Little John, knighthood, heroism, and kindness, and raises interesting problems such as questions regarding group loyalty and kindness to the weak and the poor.

Capturing the Wild Horse is handicapped by a lack of such appeals. Capturing wild horses and training them to perform marvelous feats would give the narrative a human appeal. Such interests as it caters to come later in children's development, but even then the same author's tales of Rip or Ichabod with their play upon human shortcomings and superstitions are much more certain of a favorable hearing. Pupils care very little about the outcome of a wild horse hunt; a selection which does not compel the reader to finish it must always take its chances with school pupils as it has to with the general reading public. A few persons will finish fine literary selections partially for the literary merit; teachers' judgments indicate, however, that school pupils will not appreciate literature better as a result of having read passages in which attention flags as it does in this selection.

What Constitutes a State. The criticisms indicate that this selection is *too mature*, *too didactic*, and that it contains *symbolism* and *words* which are too difficult. Pupils made similar criticisms and also showed by their answers to questions that the poem is too difficult for them; reasons for its difficulties are found in nearly every line. Such phrases as *labored mound*, *moated gate*, *turrets crowned*, *broad armed ports*, *laughing at the storm*, *spangled courts*, and *perfume to pride* occur in lines two to eight at the rate of two per line. These examples of difficult words and difficult symbolism show that a great deal of explanation is needed to enable pupils to understand merely the opening lines. The following questions were asked of the pupils in order

to test their comprehension of such phrases as those just quoted:

> How do rich navies "laugh at the storm"?
> What is meant by the "state's collected will"?

The first of these questions was answered correctly by the following percentages of pupils of Grades VI, VII, and VIII, respectively: 50 per cent, 48 per cent, and 54 per cent; the second question, by the following percentages: 21 per cent, 58 per cent, and 28 per cent. Avoidance of this poem is recommended by many teachers, while less than 50 per cent of the pupils of Grades VI and VII either enjoy or understand it.

Thanatopsis. Bryant's *Thanatopsis* is so widely used and is disliked by so many teachers that it deserves analysis. *Over-maturity*, *abstractness*, and *sadness* are its alleged defects. The well-known opening of this selection exemplifies the undesirable qualities. First, the sentence order is very unusual. Second, there are several difficult phrases, as Nature's "various language," "holds communion," and "her visible forms." These difficult constructions and phrases conceal the antecedent of "him" in the first line and confuse the pupil.

The second sentence begins with the brooding thought of the "last bitter hour," and "sad images of stern agony," phrases which, in the opinion of some teachers, had better pass unexplained. The next sentence warns the reader that the "Earth that nourished thee, shall claim thy growth, to be resolved to earth again." These lines are also quite out of keeping with the matters which teachers find interesting to pupils. There are, of course, pupils and teachers who are not averse to these dismal forebodings. Unless, however, a supervisor has strong reasons for believing that an extraordinarily large percentage of his teachers belong to

the group favorable to the poem, he should heed the warning of about 50 per cent of the teachers who find it unsatisfactory.

The Fairyland of Science. An informational selection which gives difficulty to sixth-grade teachers is *The Fairyland of Science.* An analysis of it shows a number of faults. First, pupils of Grade VI may secretly enjoy fairy tales, but the clear reference of the title to a childish type of appeal is not conducive to interest. The next unfavorable suggestion comes in the first sentence, where the reader is reminded of the common impression that science is "a bundle of dry facts." The next sentence announces the author's attempt to prove that this common belief is incorrect. The really interesting material of this selection is further burdened with subsequent references to fairyland: "Tell me, why do you love fairyland? What is its character?" and so forth. This style which is believed to be suitable for children just because it employs references adapted to pupils of Grades II to IV gives the impression that the selection is "written down" for children. If there is anything which pupils of Grade VI desire to escape, it is the suggestion that they are still children. Sixth-grade pupils' judgments show, for example, that the tale of Aladdin is very interesting to them, but they add that they are "pretty old for fairy tales." In *The Fairyland of Science,* however, the pupils are told that "wherever they wander," when old as well as when young, these fairies — fabrications for little folk — will follow them. In contrast with the lack of success of this selection is the success of other informational material which is written in a virile, unpatronizing style.

The Crow. One of the most unsuccessful selections in the newer readers is an adaptation of one of John Burroughs' essays, and is entitled *The Crow.* This nature-study selec-

tion is mentioned sixteen times in the responses to the first questionnaire and each time unfavorably. Its alleged faults are *over-maturity* and *lack of story or action.*

An analysis of this passage in comparison with certain favorites for the same grade shows that the diction of the two selections is about alike in difficulty. With the first paragraph of *The Crow*, the pupils would need a little help in understanding the phrase, " the air of a lord of the soil." Beyond this, few words or phrases require explanation to the average third-grade class. The selection does not deal with abstractions. The subject matter can be readily understood by pupils.

The content presented about the crow's life consists of the following: leaving meat near a window for a crow; the crow carrying the meat away; the crow lighting on the ground and beginning to eat; a fellow-crow coming near; a struggle expected but avoided; the first crow making a " gesture " and flying away without the meat; the second crow flying to the meat and starting to eat; the return of the first crow; division and carrying away of the meat. The second part of the selection continues: the crow's attitude toward a trap; trying to feed a crow by placing meat on the branch of a tree; a careful investigation for three days by two crows; a portion of meat eaten on the third day; the position of the meat changed to a fork in the tree and later to the ground; a dog carrying away the meat; and finally the crow quitting the tree.

Although similar attempts to feed birds are made by many children in winter, the selection is uninteresting. Nothing unusual happens, or rather the lack of action in at least two places is the most unusual characteristic of the passage. The ending gives a particularly strong impression of a desire to close the narrative: at last a dog carried off the bone, and the crows no longer visited the

tree. Such an ending is in marked contrast with the closing of such a successful story as *The Knights of the Silver Shield*. In this account of knights, the "golden star" was, at the end of the battle, "still shining," and the lord of the castle addressed the knights as follows: "Sir Roland has fought and won the hardest battle of all today." It is noteworthy that Sir Roland did not lay down his shield for some straggler to find, but that a definite objective was attained and with the portrayal of a feeling of victory, this superior selection closes. These comments and comparisons indicate the reasons for the teachers' criticism of the lack of action in *The Crow*.

Rose, Daisy, and Lily. The first-grade selection entitled *Rose, Daisy, and Lily* is disliked by all teachers who mentioned it. *Lack of action*, *hard words*, and *over-maturity* are its faults. This three-page selection consists of a description of Rose, Daisy, and Lily growing side by side in a beautiful garden and a conversation about where they spent the winter, excepting that Daisy does not know where she was.

Lack of action is an obvious characteristic of this selection. Action might readily be introduced by an animated introduction, by correlated nature study, or by dramatization. Hard words are found in several lines: *Daisy*, *beautiful*, *garden*, *these*, *alone*, *flowers*, *around*, *none*, *bright-eyed*, *winter*, *white*, *indeed*, *asleep*, *awake*, *shining*, *brightly*, *felt*, *melting*, *violet*, *blossoming*, and *leaves*. Drill upon the following words is provided by a word list which precedes the lesson: *these*, *felt*, *melting*, *would*, *sun*, *none*, and *indeed*. The other words just cited occur in earlier selections in the reader or are preceded by words upon the same bases: *blossoming* is preceded by *blossom;* *around*, by *round;* and so forth. The context of nearly all these words is familiar to the pupils. The only word which may not

have been used is *indeed*. The teachers' criticism seems, therefore, to result from the lack of drill upon the words as they occur in the reader or the lack of interesting content which might carry pupils over otherwise difficult passages.

Inferior reading material defined by teachers and pupils. Enough inferior selections have been cited in the tables and analyses of this section to illustrate the meaning of the term " undesirable reading selections." The analyses lead to the following conclusions about materials which teachers and pupils designate as undesirable:

First, teachers agree in regard to the attributes of undesirability of reading materials.

Second, undesirable selections are commonly those which are so difficult as to make silent reading difficult, if not impossible, and lead to verbalism and formalism in pupils as a result of premature attempts to force adult opinions upon them.[1]

Third, the selections which large numbers of representative teachers find unsatisfactory are too hazardous for continued use in reading and literature courses; only in exceptional cases can teachers interest their pupils in these selections.

5. The detection of superior reading selections. Of even greater importance than fortification against undesirable selections is the ability to detect superior reading selections. The discussion of the qualities that distinguish superior selections has already called attention to the characteristics which seem to be the determinants of superiority and to the varying importance of these determinants from grade to grade. The interest of children in

[1] *Cf.* the discussion in Chapter IV of the relation between comprehension and interest. That discussion suggests that there may be a very close relation between general intelligence and interest.

these qualities is, however, so dependent upon the form of the material embodying them that one hesitates to say that pupils of any given grade will find selections possessing these qualities uninteresting, provided the selections are of proper maturity for the grade. For one may cite, as examples, animal stories and stories of animal play that are favorites in the lower grades, but one can find selections like *Patrasche the Dog of Flanders* and Muir's *Stickeen* which are equally favored in the intermediate and later grades. The case of interesting repetition is similar, for this quality enhances the interest of pupils in certain selections read in the primary grades, and, in appropriate settings, it enhances the interest even of adults in certain of Poe's poems and in certain famous orations. Furthermore, pupils of Grade I, like those of Grade VIII, are interested in informational reading, provided the content is applicable to their activities.

In Table XXVI are catalogued selections which are judged as superior by representative numbers of either teachers or pupils or both. An arbitrary standard of superiority was set up before this table was compiled: only the selections which were judged favorably by ninety per cent or more of the teachers judging them, and both favored and comprehended by 80 per cent or more of the pupils who reported upon them were admitted to the list. This standard admitted nearly all the selections which obtained high ratings in either of the questionnaires. In the case of selections which obtained high ratings in more than one grade, the final placement in the list was in the grades in which the judgments of teachers indicated that superiority would be greatest; certain selections which seem to be equally appropriate for more than one grade were listed for as many as two different grades.

TABLE XXVI

Superior Selections for All Grades

Grade I

The Gingerbread Boy
The Three Bears
The Three Little Pigs
Three Billy Goats Gruff
The Boy and the Goat
The Little Red Hen
Cinderella
Little Boy Blue
The Elves and the Shoemaker
The Lion and the Mouse
Tom and the Wind
Tom, Tom the Piper's Son
How Patty Gave Thanks
Johnny Cake
Playing in the Snow
The Crow and the Pitcher
The Hare and the Tortoise

Christmas Morning
Santa Claus
Who Is It? Santa Claus?
The Night Before Christmas
The Little Steam Engine
The Little Plant
The Caterpillar
Sing a Song of Sixpence
The Clouds
What Does Little Birdie Say?
The Swing
My Dream
My Shadow
The North Wind
Our Flag
The Star
Snow Birds
Snow Flakes

Grade II

The Bremen Band
The Elves and the Shoemaker
Little Red Riding Hood
How Mrs. White Hen Helped Rose

Androclus and the Lion
Jackal and Alligator
Hans in Luck

Mr. and Mrs. Leghorn to the Rescue

The Golden Touch
Town Mouse and Field Mouse
When the Little Boy Ran Away
Ruff's Adventure

Belling the Cat
Sleeping Beauty
Billy Binks
Nathan and the Bear

The Crow and the Pitcher
The Hare and the Tortoise
The Magpie's Lesson
The Doll's Thanksgiving Dinner
The Ant and the Grasshopper

My Shadow
The Swing
Our Flag
I Saw a Ship a-Sailing
Who Has Seen the Wind?

Grade III

The Tar Baby
The Wishing Gate
The Golden Touch
Sleeping Beauty
Brownies and the Cook
The Three Wishes
Pandora's Box
Robinson Crusoe
The Leak in the Dike
Hans the Shepherd Boy
Hans Who Made the Princess Laugh
Dick Whittington and His Cat
William Tell
Knights of the Silver Shield
Knights of the Silver Arrows
Washington's Boyhood
David the Slinger
St. George and the Dragon
The Boy, the Bees, and the British
Black Beauty
The Golden Cups
The Bell of Atri
The Skylark's Spurs

Grade IV

The Wishing Gate
The Magic Prison
Snow-White and Rose-Red
Aladdin and the Wonderful Lamp
Knights of the Silver Shield
Knights of the Silver Arrow
How Cedric Became a Knight
Dick Whittington and His Cat
The Little Post-boy
Maggie Visits the Gypsies
Beowulf, the Brave Prince
William Tell
The Little Acadian
Roland the Noble Knight
Tillie's Christmas
Tom, Dick, and Harry
The Brave Boy's Adventure
A Boy Hero
The History of Tip-Top
Florinda
Black Beauty
Patrasche the Dog of Flanders
A True Story About Leo
Alexander and Bucephalus
Out to Old Aunt Mary's
The First Thanksgiving
Robert of Lincoln
The Twelve Months
Inchcape Rock

Grade V

The Nurnberg Stove
The King of the Golden River
Aladdin and the Wonderful Lamp
Arabian Nights (Selections)
Robin Hood
Maggie Visits the Gypsies
The Leak in the Dike (Prose)
How Cedric Became a Knight
Robinson Crusoe
William Tell
A Brave Boy
Tom the Chimney Sweep
Cosette
Ulysses at the Cyclops
Beautiful Joe
The Archery Contest
The Sportsman
Hiawatha
The Simple Old Man
The Village Blacksmith

Grade VI

The King of the Golden River
Tom and Maggie
Robin Hood
William Tell
The Pied Piper of Hamelin
Horatius at the Bridge
Christmas Dinner at the Cratchits'
Kentucky Belle
Midget, the Return Horse
Gulliver's Travels
The Simple Old Man
Hiawatha
The Legend of Bregenz
Birds of Killingworth
The Arrow and the Song
The Sandpiper
The Bishop and the Convict

Grade VII

Rip Van Winkle
The Legend of the Moor's Legacy
King Arthur Stories
The Barefoot Boy
The Pied Piper of Hamelin
Horatius at the Bridge
Christmas at the Cratchits'
Mr. Pickwick's Slide
Before Coins Were Made
The Minting of Coins
Paper Money
The Man Without a Country
The Courtship of Miles Standish
Evangeline
Snowbound
The Day is Done
King Robert of Sicily
Paul Revere's Ride
To a Waterfowl
The Sandpiper
Birds of Killingworth
Marmion and Douglas
Money in the Home and the Community

Grade VIII

Rip Van Winkle
The Legend of Sleepy Hollow
Mr. Pickwick's Slide
The Barefoot Boy
The Great Stone Face
The Gettysburg Address
Before Coins Were Made
The Minting of Coins
Paper Money
Money in the Home and the Community
The Man Without a Country
Raleigh's Coat
How I Killed a Bear
The Prairie Fire
Evangeline
Snowbound
Paul Revere's Ride
The Courtship of Miles Standish
The Revenge
Marmion and Douglas
Oh Captain, My Captain
Hervé Riel
The Building of the Ship
Julius Caesar
The Skeleton in Armor
The Splendor Falls
The Daffodil
The One-Hoss Shay
Douglas and Randolph (Scott)

Table XXVII shows that there is very close agreement between teachers and pupils about the superior selections upon which both passed judgment. The percentage of teachers who favored each selection usually exceeds that of pupils because the pupils judged the selections before class study, while teachers of course passed their judgments after class study.

Prose and poetry are not differentiated in the lists of superior selections because there are no grounds for making such a differentiation. Pupils are interested in either prose or poetry if the determinants of interest are embodied in it. The responses of pupils about the poems which they read indicate the causes for the common belief that children, especially boys, do not enjoy poetry. The first poem reported on by them was *Excelsior;* only a few liked this poem, while the majority stated that they "did not like poetry anyhow." In nearly every case, however, the pupils who said that they dislike poetry explained why they do like *The Village Blacksmith*, *The Barefoot Boy*, and *The Wonderful One-Hoss Shay*. The results confirm the belief of many teachers that the difficulty is nearly always with certain poems and not with poetry in general; this statement holds for both boys and girls.

6. Analyses of superior reading selections. The following analyses of superior selections call attention to desirable qualities. Owing to the general familiarity with many of these selections, there is no need for such detailed treatment as was given in the preceding paragraphs to undesirable selections.

The Tar Baby. This is an outstanding superior selection for Grade III. It has for its setting a woodland scene in hot weather. Two animals, a rabbit and a fox, are interested in avoiding the extreme heat. Brother Fox proposes that they build a cool little house. The rabbit

TABLE XXVII

Comparative Judgments of Teachers and Pupils on Selections Which Are Very Satisfactory in the Elementary School

(The percentages of favorable responses are shown for Questionnaire I, Questionnaire II, and Pupils)

Selections	Grades	Q I	Q II	Pupils
The Leak in the Dike	III	—	100	97
	IV	100	99	96
	V	100	99	99
Dick Whittington and His Cat	III	100	98	89
	IV	93	99	91
Aladdin and the Wonderful Lamp	III	100	95	86
	IV	93	97	87
	V	90	98	93
Cosette	IV	94	96	80
	V	90	—	90
The Village Blacksmith	IV	100	94	91
	V	100	97	97
	VI	—	94	97
Christmas at the Cratchits'	V	86	92	84
	VI	97	90	84
	VII	97	99	86
	VIII	—	98	90
Paul Revere's Ride	VI	—	97	92
	VII	—	96	94
	VIII	—	95	100
The Barefoot Boy	VI	91	96	87
	VII	—	91	100
	VIII	—	93	99
The Wonderful One-Hoss Shay	VII	—	100	76
	VIII	100	98	82
The Gettysburg Address	VII	—	92	82
	VIII	—	100	82

does not favor this proposal and says that a few green leaves are quite sufficient for him. The fox proceeds to build a house. After the house is completed, the rabbit, in the absence of the fox, occupies it. The fox plans to entrap

the rabbit by means of a wooden doll covered with tar. The rabbit comes along, and after an attempted argument with the exasperating doll, finds that he is unable to free himself from the sticky object which he has tried to force into a conversation. The fox then comes along and places fire-wood near the rabbit, at the same time audibly planning for a feast. The fire is kindled, the tar becomes heated, the rabbit extricates himself, and runs away.

This story avoids a fault of many morality stories by portraying the administering of only a vigorous warning to the slothful rabbit. It holds the reader in suspense while the rabbit is trying to extricate himself from the toils of the silent, sticky wooden doll. The humor and resourcefulness of both the fox and rabbit are shown in their plans to entrap and to attain freedom, respectively. The pleasing effect of the story is enhanced by a satisfactory ending in which the fox's extreme plans for punishment are foiled by his own efforts while the rabbit is given a warning which he will remember. The story also offers an excellent opportunity for dramatization.

Teachers' comments show that they value especially the action, which is both dramatic and otherwise interesting, the animal play, the resourcefulness of the rabbit, and the ease with which the selection can be understood. Other incidental values are its good ending and vocabulary.

The Three Bears. The alleged values of the selection entitled *The Three Bears* are the animal element and personification, interesting action, adventure, interesting characters, easy content and vocabulary, and availability for dramatization. Many teachers who responded to the questionnaires referred also to the " variety " contained in the story. This variety of appeal results from such qualities as the following in addition to those already mentioned: *interesting repetition*, the bear's home, opportunity for

dramatic reading and telling, the child's escapades. This selection has also a good ending, humor, and provision for the play of imagination. Such a variety of appeals is one of the notable characteristics of superior selections.

The Gingerbread Boy. Another favorite of the primary grades is *The Gingerbread Boy.* This English folk tale relates the story of the making and baking of a gingerbread boy, his subsequent adventures as he fled from the old man and woman, and his last words when the fox craftily captured him. The important qualities of the story are fairly obvious if one reads only this fragmentary outline. Interesting action and adventure are exemplified from the time the old woman begins to plan the gingerbread boy until his ultimate capture by the fox. The interesting characters are the old man and woman who live in the little old house under a hill, the cow, the horse, the fox, and the boy himself, all of whom engage in interesting conversation. The rollicking versions which appear in several different readers emphasize the humor of the situation and prepare judiciously for the " sad ending " of the story. Dramatization of the story is easy and involves interesting action as well as interesting conversation. The incidental teaching values of the selections are its availability for the cultivation of imagination and expression and for enlarging the vocabulary.

The Knights of the Silver Shield; How Little Cedric Became a Knight. The Knights of the Silver Shield is one of the most popular selections for Grades III to V. The tale of *How Little Cedric Became a Knight* calls forth much praise of knighthood — its interesting characters, adventure, and portrayal in an unobtrusive way of wholesome virtues. Several teachers asked in their responses to the questionnaires why they cannot have more tales of knighthood. Although these tales are desirable for Grade III,

TABLE XXVIII

The Percentage of Junior High-School Pupils Who Passed Favorable Judgments upon Informational Material Written Especially for Their Use

(The comments indicate the points of interest)

Selection	Number of Judgments	Percentage of Favorable Judgments	Comments and Their Frequency
Before Coins Were Made	82	100	Various media of exchange, 37 History, 24 Evolution of modern money, 23 Indian trade, 20 Barter, 20 Need for use of metal as medium, 15 Trading in Virginia, 11 Ants taking gold out of ground, 6 Well told, 6 Early use of iron for money, 4 Chinese making hoes, 1 Use of scalps by Indians, 1
The Minting of Coins	82	96	How money is made, 48 Stamping the coins, 38 Weighing the coins, 23 Making over coins, 20 Getting designs, 19 History, 18 Ancient methods of computation, 17 Well told, 2 Uninteresting, 2 Too mature, 1
Paper Money	82	99	The engraving process, 36 How paper money is made, 33 The kind of paper used, 21 How counterfeiting is avoided, 21 How paper money is made over, 20 Economy in having paper money, 15 Getting rid of old bills, 13 History, 13 Redeeming old bills, 6 United States the first to use paper money, 3 Guarding the vaults, 1 Counting the money, 1 Too mature, 1
Money in the Community and the Home	82	94	Use at home of money from taxes, 26 National and local expenses, 24 The process of taxation, 20 Interesting information about taxes, 19 The family budget, 18 Assessments, 13 War-time use of money, 7 Well told, 2 Uninteresting, 2 Tired hearing of taxes, 2 Not so well told as the others, 1

they seem to be even more suitable for Grades IV and V. In these grades the stories can be freely elaborated, while in Grade III there is danger, if the story is well rendered, of using over-difficult constructions.

7. Informational selections are superior when well-written. The interest of children in the informational material of standard reading selections is very slight, but their interest in informational matter written especially for such use is, as Table XXVIII shows, very keen. Additional evidence of children's interest in this kind of material is furnished by their comments on these passages. A comparison of these comments with those upon standard selections under the same conditions emphasizes the vigorous appeal of this new material. The following comments were selected from eighth-grade pupils' responses:

C. F. — *What Constitutes a State.* "Dislike. Because it is not a poem for a boy. Uninteresting."

Abou Ben Adhem. "Dislike. Because it is not exciting or sad or glad, and has too much talking, not many rhyming sentences."

Gettysburg Address. "Like. Because it's by A. Lincoln; it's patriotic."

Before Coins Were Made. "Like. Because it tells what people did in ancient times concerning money. How the iron hoes were used in China. About the ants and the gold they took out of the ground. What traders used and what the Indians used for money. How the people in Virginia used tobacco for money."

B. D. — *What Constitutes a State.* "Like. Because it is so well expressed and you can learn something from it."

Paul Revere's Ride. "Like. Because of the patriotism shown and the continuous rhythm throughout the selection."

Marco Bozzaris. "Like. Because it is so vividly pictured and is very natural."

Paper Money. "Like. Because I have found the value of paper money and the way and means of making it and practically remaking it."

C. D. — *Marco Bozzaris.* "Like. I like this because it is a war story and exciting."

Christmas at the Cratchits'. "Like. I like this because it seems so much like a true story."

After writing more than a page on the *Community Life Leaflets,* C. D. closed by saying that she liked the leaflet "because it tells all about the making of money, the history of money, how they traded goods of different sorts instead of using money, designing of money, how the government taxes and collects taxes, national, county, state, and public expenses. This (the history of money) is all very interesting."

These informational selections have been reported upon also by the fifty-nine teachers who used them prior to the spring of 1919. Practically all, from 95 to 100 per cent, asserted that these selections were successful in any of the grades from the fifth to the ninth.

The reasons for the superiority of this informational material are clear. The selection entitled *Before Coins Were Made,* for example, avoids any such reference to the child's presumed interests as is found in certain materials such as the selection entitled *The Fairyland of Science.* The child is not told that he "will be interested in learning" about something. There is no apology for presenting information to children; the account is allowed to stand on its own merits. These merits are exemplified in the first paragraph, the characteristics of which are such that it would receive a high rating even if judged by standards designed for evaluating standard poems, tales of adventure, or romances. This first paragraph with its interesting action, suggestions of adventure and heroism, inter-

esting characters, problems, and information is as follows:

"When the agents of the Hudson's Bay Company began to trade with the Indians they found it useless to talk about the prices of the things to be bought and sold in English money. The Indians did not want silver or gold. They wanted guns and knives and food and clothing. In return they brought furs to the trading stations. Among the Indians everything was spoken of as worth a certain number of beaver skins. Traders found that they could deal with the Indians much more easily by saying guns and other things cost so many skins. For example, a gun cost twenty skins."

Throughout this informal account are picturesque details which appeal to the reader's interests and hold his attention so that other facts may be presented effectively. For example, early kinds of money such as wampum, dried codfish, and the red scalps of woodpeckers are mentioned as early media of exchange. In another place, the beginnings of metal money are described. The story which Herodotus tells of the huge ants bringing up gold when they burrow, and the story of the use of iron hoes as a medium of exchange in China aid in enlivening this part of the account.

Superior reading material defined by teachers and pupils. Superior reading material may now be described as follows: It is within the mental grasp of the pupils by whom it is to be read; it possesses one or more, usually more, of the determining qualities which make selections intrinsically interesting to children; it possesses literary merit; it is found by those who administer the course in reading to lead to the attainment of the objectives of the course in reading.

Children's interests as a measure of the success of high-school reading material. *a.* **Plan and scope of the high-school investigation through teachers.** During the years

1922 and 1923, two questionnaires were sent to Wisconsin high schools.[1] The first was sent to the teachers of English in North Central high schools. Fifty-six schools responded; they represent 268 teachers of English and 25,061 high-school pupils. The teachers in their responses named the eight most popular books for each high-school grade both for credit reading and for voluntary reading; this portion of the responses was based upon pupils' statements. The teachers also reported upon the degree of success achieved in the classroom study of each of twenty-nine classics, and gave their reasons for the success or lack of it.

TABLE XXIX

Books Chosen for Credit Twenty-five or More Times by High-School Pupils

Call of the Wild	94	Up from Slavery	41
Tom Sawyer	83	Huckleberry Finn	40
Jane Eyre	71	Mill on the Floss	40
Treasure Island	63	The Promised Land	38
Oliver Twist	61	Kidnapped	38
Story of My Life (Keller)	58	Tale of Two Cities	32
Lorna Doone	58	Count of Monte Cristo	31
Little Shepherd of Kingdom Come	55	Vanity Fair	29
Ben Hur	51	Little Minister	28
David Copperfield	51	Man Without a Country	27
Last of the Mohicans	50	Penrod	26
Ramona	45	Hoosier Schoolmaster	26
The Crisis	45	The Virginian	32

TABLE XXX

Authors Whose Books Were Chosen for Credit Twenty-five or More Times by High-School Pupils

Porter, G. S.	337	Twain	158
Dickens	202	Stevenson	130

[1] These questionnaires were in charge of Frances Mary Hughes and Ida M. Page, respectively.

TABLE XXX — *Continued*

London	108	Jackson (H. H.)	45
Cooper	92	Antin	42
Eliot	80	Dumas	41
Kipling	73	Washington, B. T.	41
Brontë	71	White, S. E.	40
Churchill	71	Morgan	39
Scott	68	Seton-Thompson	39
Shakespeare	60	Wister	32
Blackmore	58	Alcott	30
Keller	58	Hugo	29
Fox	55	Muir	29
Eggleston	51	Roosevelt	29
Wallace, Gen.	51	Aldrich	28
Barrie	48	Hale	27
Hawthorne	48	O. Henry	27
Tarkington	48	Wiggin	27
Thackeray	47	Verne	25

b. **The results of high-school teachers' responses.** Table XXIX contains a list of the books named twenty-five or more times as the most popular for extra-class credit reading. Two of the books, *David Copperfield* and *Vanity Fair*, probably owe some of their apparent popularity to the fact that they yield a larger number of credit points to the pupils than the less ponderous volumes. Table XXX catalogues the names of authors whose books were mentioned twenty-five or more times. Many readers will probably find some comfort in the fact that Dickens, Stevenson, and Cooper stand near the top of the list. The glory of these writers is, however, dimmed by the greater glory of the writer whose name heads the list. It will be noted that Gene Stratton Porter received more votes than any other two authors. Even if one cavils about the literary taste of these high-school pupils, one need not criticize adversely the teachers of English. The Porter novels are within easy reach of the pupils' mental grasp, and there are few tasks harder than that of actually extending the mental grasp

of children. This quality together with vivid accounts of romance, outdoor life, and present-day conditions gives them an immense advantage over standard classics.

Tables XXXI and XXXII show even more forcefully the status of pupils' taste, because the pupils were not restrained by school requirements in their voluntary reading. Since there is little if any difference in the maturity of these books, there are, obviously, no perceptible differences between the reading tastes of pupils of different years so far as the whole group of very popular books and writers is concerned. There is, however, a noticeable difference between the voluntary reading of freshmen and that of seniors. The senior list of books taken as a whole shows a slightly more frequent mentioning of standard authors and works; these books were seldom mentioned more than two or three times each and are consequently omitted from these tables. A voluntary reading list made up of the books most frequently mentioned by ninety per cent of the students of each of the high school grades is practically the same as the list in Table XXXI. This seems equivalent to saying that, for the majority of these high-school pupils, little improve-

TABLE XXXI

Books Chosen Voluntarily Twenty-five Times or More by High-School Pupils

Call of the Wild	67	Seventeen	35
A Girl of the Limberlost	65	Tarzan Series	33
Freckles	62	Her Father's Daughter	32
Tom Sawyer	62	Shepherd of the Hills	31
Riders of the Purple Sage	60	The Lone Star Ranger	30
Main Street	46	White Fang	29
Little Women	43	Desert Gold	28
Anne of Green Gables	43	The Sheik	27
Pollyanna	41	Little Shepherd of Kingdom Come	27
HuckleberryFinn	39	Daddy Long-Legs	26
Penrod	36		

TABLE XXXII

Authors Whose Books Were Chosen Twenty-five or More Times for Voluntary Reading by High-School Pupils

Grey, Zane	232	Montgomery	46
Porter, G. S	200	Stevenson	44
Mark Twain	139	Burroughs, E. R.	37
London	115	Cooper	37
Wright	114	Fox	37
Tarkington	86	Churchill	33
Porter, E.	69	Dumas	33
Alcott	61	Doyle	30
Curwood	61	Webster, Jean	30
Dickens	47	Wiggin	28
Rinehart	47	Hull	27
Lewis	46	White, S. E.	26

ment in discrimination is indicated in their non-credit reading as they progress through high school.

The judgments of high-school teachers regarding twenty-nine standard classics are recorded in Table XXXIII. The year in which many of these classics are read varies and probably influences the success of certain books; this important point was, however, omitted from this investigation. The table shows that among the teachers of this group there is considerable unanimity of opinion about certain selections. The Shakespearean plays, *Silas Marner*, *Ivanhoe*, *A Tale of Two Cities*, and Poe's *Tales* are outstanding for their success. Burke's *Conciliation Speech*, *The Essay on Milton*, Washington's *Farewell Address*, Milton's *Minor Poems*, and Emerson's *Essays* are outstanding failures. There are of course too few judgments to condemn these classics, but additional reactions usually confirmed the first responses in each of the questionnaires on elementary school materials. It is known, on the contrary, however, that certain teachers regard these apparently unsuccessful classics as excellent. The same is, of course,

true of all more or less hazardous teaching material, but the point which this chapter aims to emphasize is that most teachers, in their own opinion, fail or at least fall below their usual mark, when they try to teach certain

TABLE XXXIII

Teachers' Reactions to Materials for Class Study in High School

Books	No. Teachers Reporting	Per Cent of Teachers Favorable
Silas Marner	80	99
Macbeth	47	98
Ivanhoe	47	96
Hamlet	26	96
A Tale of Two Cities	39	95
Poe's Tales	14	93
Sohrab and Rustum	26	88
Julius Caesar	36	83
Irving's Sketch Book	22	82
Rime of the Ancient Mariner	24	80
Idylls of the King	33	76
The Lady of the Lake	26	72
Teter's One Hundred Narrative Poems	14	72
Thanatopsis and Other Poems	8	63
Essay on Johnson	9	44
Sir Roger de Coverley	18	39
Webster's Bunker Hill Oration	10	30
Chaucer's Prologue	18	28
The Vicar of Wakefield	16	25
Emerson's Essays	27	22
Milton's Minor Poems	24	20
Gulliver's Travels	5	20
Sesame and Lilies	12	16
Washington's Farewell Address	15	13
Beowulf	11	9
Burke's Conciliation Speech	49	8
Essay on Milton	14	7
Franklin's Autobiography	10	0
Henry Esmond	9	0

TABLE XXXIV

Undesirable Qualities of High-School Literature for Class Study
(Based upon responses from 268 teachers of Grades IX to XII)

Qualities	Relative Frequencies of the Qualities in Teachers' Comments
Too mature	30
Poor subject matter	13
Lacks action	11
Too remote from present-day life	10
Unfamiliar background	8
Abstract	8
Undesirable literary form, as essay, biography, poetry	8
Fails to arouse imagination	6
Too many details	6

TABLE XXXV

Desirable Qualities of High-School Literature for Class Study
(Based upon responses from 268 teachers of Grades IX to XII)

Qualities	Relative Frequencies of the Qualities in Teachers' Comments
Character study	16
Interesting action, dramatic or non-dramatic	23
Interesting problems	13
Interesting information	10
Within grasp	9
Supernatural or mystery	7
Humor	5
Romance	4
Knighthood	3
Sympathy, portrayal of	3
Well written and worthy content	3
Rhyme and rhythm	2
Interesting descriptions	2

selections. It is, therefore, highly desirable that the probabilities of success be known. The unusual effort demanded by these difficult selections may then be expended in time to make them worth while.

The alleged reasons for failure or success with literary material are shown in Tables XXXIV and XXXV, respectively. Table XXXIV shows that the alleged overmaturity of subject matter is the most prominent undesirable quality in high-school literature. Earlier tables of this chapter showed the same condition in regard to elementary school materials. Table XXXV when compared with Diagram VII indicates maturity of high-school pupils as compared with elementary-school pupils. High-school teachers' success in teaching literary materials seems to depend largely upon the presence of interesting problems and interesting information. As for elementary-school pupils, the qualities referring to the plot and action are very important also in determining success or failure of a selection or book in high school.

c. **The investigation of high-school pupils' interests through the pupils themselves.** The second questionnaire to high schools was presented directly to the one thousand high-school pupils of West Allis, Wisconsin. These pupils were asked to name their favorite books, their reasons for choices, and to answer various questions about their literary pursuits. The favorite credit novels reported for Grades VII to IX are *Tom Sawyer*, *Huckleberry Finn*, and *Treasure Island;* for Grades X to XII, *Silas Marner*, *David Copperfield*, *Ivanhoe*, and *Lorna Doone*. The favorite class study poems reported for Grades VII to IX are *Evangeline*, *Idylls of the King*, and *The Lady of the Lake;* for Grades X to XII, *The Lady of the Lake*, *Sohrab and Rustum*, *Snowbound*, and *Evangeline*. Ten of Shakespeare's plays were reported as having been read by from 12 to 189 pupils

of Grades X to XII; of these plays, the order of popularity for the four most frequently read is as follows: *The Merchant of Venice*, *Macbeth*, *Julius Caesar*, and *Midsummer Night's Dream*. Books on scouting were reported frequently by boys of Grades VII to IX.

The West Allis pupils of Grades X to XII were asked also to state whether or not they were interested in certain forms of literature. First, they were asked, "Do you honestly like to read poetry?" To this suggestive question 50 per cent of the pupils asserted that they do enjoy poetry, while only 26 per cent stated that they do not enjoy it; the remaining 24 per cent qualified their answers.

TABLE XXXVI

Qualities Which Interest High-School Pupils in Literature
(Based upon the statements of 667 pupils of Grades VII to XII)

Qualities	Relative Importance of Qualities in:		
	Books Read out of School	Novels	Shakespeare's Plays
Interesting or dramatic action, adventure	32	28	42
Interesting information	18	6	5
Realism	9	12	0
Humor	7	2	12
Nature and outdoor life	8	0	0
Fine literary style	6	2	12
Child life	6	0	0
Moral	4	2	0
Interesting characters	3	22	16
Supernatural or mystery	3	13	9
Animal life	2	0	0
Pathos	2	0	0
Romance	0	4	4
Description	0	9	0

Essays are disliked by 63 per cent of these pupils. Eighty-six per cent prefer novels to plays.

The qualities which interest these high-school pupils in their favorite books are shown in Table XXXVI. Their interest in information and nature and outdoor life is attributable in part to their interest in boy scout activities. Apparently, the characters depicted in books read out of school impress themselves less upon children than those depicted in books read in class. Judging from the books named by the pupils, however, this difference is a result of the teaching rather than of the books themselves.

d. **The real problem of high-school literature study.** To the student of the teaching of literature, the most striking point in the foregoing sketch of high-school pupils' interests is that there is so little evidence of actual accomplishment in the improvement of literary taste. So long as pupils are within the classroom, they attend more or less closely to the literature under discussion. After the class is over, they still maintain some interest in what they have studied. Yet, most of them when allowed to select books for their own recreation, go, not to excellent literature, but to decidedly inferior literature. The real problem of high-school literature study is not merely the cultivation of an interest in reading; it includes also the cultivating by joyous, wholesome, and instructive experiences of an interest in the reading of excellent literature.

Several reasons may be advanced for the apparent failure to induce pupils voluntarily to read good literature. (1) The classroom experiences with standard literature may be unpleasant. If this is the case, children are unlikely to undergo similar experiences unless compelled to do so. The high-school pupils from whom responses were obtained directly appeared, however, to be greatly interested in their class study at the time of the investigation. (2) The

task of training so many pupils as now attend high school may be an impossible one. In spite of the fact that 95 per cent of the pupils of a large high school assert that they enjoy extra-class reading, it may yet be true that their early literary training in their homes has been neglected so that their interest is in trash rather than in good literature. An interest in reading is not a guarantee of an interest in good literature. Few teachers have convinced themselves that they can develop worthy literary interests in all their pupils. (3) The literary equipment of the literature classroom and library may be inadequate. Too often, the school library is the recipient of cast-off books from well-meaning persons who seem to believe that a working library consists of a certain quantity of books. Whenever the objection is made that the public library or the school library does not contain either good literature or varied literature, it is time for the teacher of reading and literature to begin a crusade. It is now recognized that the ability to read is of fundamental importance for everyone. It is also recognized abroad as well as in America that " the provision of a good library is a duty at least as incumbent upon school authorities as the provision of a good laboratory." [1] (4) The teacher of literature may be attempting to force the growth of her pupils too rapidly. The experiences of teachers in both elementary and high schools stand as a solemn warning in this matter. In all the twelve grades of the public schools, teachers assert that over-maturity of content is the most frequent cause of failure with standard literature. Successful teachers bring about literary development by beginning with children's interests and then leading pupils by much well selected reading to the plane of more difficult reading. Teachers who follow this plan do not necessarily

[1] Newbolt, H. (Chairman). *The Teaching of English in England.* Harcourt, Brace and Company, 1922. P. 334.

begin with cheap, inferior, easy literature; instead, they begin with excellent, easy literature and thus cater only to the legitimate interests of pupils and not to their whims.

Many other more or less important reasons may be advanced for the condition of high-school pupils' interests. The plain teaching of this entire chapter is that teachers must continue to teach much of the standard materials, hold fast to the good, and also utilize the many criteria now available for judging new materials proposed for use. The utilization of children's interests as guides in selecting excellent literature does not preclude the choice of good literature. It does, however, warn the teacher against choosing for either classroom or library any literature that lacks such qualities as interesting plot or action and interesting characters, or some other combination of the qualities shown in Table XXII. If these desirable qualities are lacking in the literature chosen, the teacher must fortify himself with unusual thoroughness and skill against partial or complete failure. The meaning of such fortification is exemplified in Chapter X, particularly in the discussion of the work of Hanes and McCoy.

The place of children's interests in the determination of the content of the course of study. Throughout this chapter emphasis has been placed upon the importance of consulting children in the selection and organization of courses in reading and literature. This emphasis has been due to a firm belief that economical teaching always takes account of the inclinations of the learner. When those inclinations are apparently opposed to development, new means and methods are often required. In the case of reading and literature, however, the inclinations of learners can be utilized to the great advantage of both teachers and pupils.

Although the discussions of this chapter have a more obvious bearing upon literature than upon the techniques of reading, their relation to reading should not be overlooked. Teachers assert that the cultivation of reading techniques is facilitated by the use of interesting content. The results of the investigations herein reported show that no single branch of reading material has a monopoly upon the interests of children. Compilers of reading material are, therefore, at liberty to seek among all forms of content for those passages which are most appropriate for the cultivation of the specific techniques of reading.

Evidence has been obtained from a considerable number of high-school students to show that the course in literature must be conducted aggressively. The course must not merely cater to the reading tastes of immature readers. If the course were designed for that purpose in high school, it might now be abandoned, because high-school pupils voluntarily read much trash that passes under the name of literature. The course must evolve a combination of desirable interests to be cultivated and excellent, attractive literature to be read. Within the course there must be established the habit of finding pleasure and profit in fine, worthy literature. Just as courses in technique develop certain forms of skill, so the course in literature should develop certain forms of taste and appreciation. So long as the content and conduct of the course are remote from pupils' interests, the course may be tolerated by pupils but it does not guide them in their reading; when the content and conduct of the course are brought within the pupils' grasp, the course in literature assumes its true place and serves as a positive guide in pupils' choice of excellent literature.

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CHAPTER VII

THE SOCIAL WORTH OF READING

Types of investigations of the social worth of reading. Investigations of the social worth of reading materials consist of analyses of the subject matter of courses in reading, of the social situations in which pupils find or will find themselves, and of the traits of children. These analyses have at times been concerned with the whole teaching situation and have led to the conclusion that the child makes progress best when his curriculum enables him most readily to realize himself at his present stage of development. According to this conclusion, the most suitable material from the point of view of social worth, is that which meets these two requirements: first, reading material must be interesting to the child, and second, it must impel the child to proceed toward a desirable objective.

Extremes of practice *versus* a strong middle ground. It is important to recognize at this early stage of the present discussion that wide differences in actual practice have resulted from the foregoing point of view. For teachers, like all other groups of thinkers, divide themselves into extremists and those who take a middle ground. As a basis for classifying teachers in this matter, one may place at opposite ends of a scale those who adhere with single-mindedness to incidental learning, and those who pin their faith to formalism. Between these two extremes of practice, one can next place those teachers who employ both incidental learning and formal methods.

An example of extreme devotion to incidental learning is provided by Professor Merriam's experiment at the Uni-

versity of Missouri. The children in the experimental school of that university carry on activities which are vital to them, and at the same time conducive to the formation of desirable controls of subject matter. These activities or projects are so informal as to cut across different school subjects and even supplant certain subjects, so far as subject titles are concerned: for example, arithmetic, writing, spelling, and grammar are not scheduled in the program of study. The following paragraphs from Charters' *Curriculum Construction* show the attitude of a competent observer toward such practices, and also suggest a method which seems to be safer than either extreme of practice.

"It is perfectly clear to me after a number of years of fairly close study of the Missouri situation, that the failure to teach portions of these subjects as independent material is answerable for definite losses of time. For instance, occasions arose when, if the teacher had not surreptitiously introduced grammar or arithmetic, the students would not have gained enough of the necessary skill to enable them to save their own time. When the children began the study of grammar in the high school without having had any in the grades, a very heavy strain was placed upon mothers and fathers in helping the children to catch up. In the lower grades there were cases when instructions in the phonic construction of the word would have materially aided children with weak memories to learn to read with desirable speed.

"It is philosophically impossible to adhere to one extreme or the other. There are advantages in subject study which arise from the absence of concrete items to interfere with the learning of bonds and relations. There are advantages in project study which arise from the intensifying of motivation and the improvement of conduct. On theoretical grounds, therefore, any efficient system of instruction would include both methods of attack, until

on scientific grounds it should be demonstrated that one is superior to the other." [1]

Examples have been cited in Chapter III of extremely formal methods, many of which were so planned as to give the first year of school little except drill upon the formal aspects of reading. Those ABC methods, and the extreme phonic methods are indeed characterized by their lack of content.

Between these extremes are such plans, subject matter, and methods as those set forth in many series of readers. These newer readers, such as the *Free and Treadwell* and *Progressive Road to Reading*, do not, however, illustrate a weak middle position. Instead, such readers illustrate the possibility of achieving the formal types of control required for efficient reading, and at the same time using interesting, vital content required by children whose reading powers are developing.

Criteria of social worth. The criteria used for judging the social worth of reading matter are similar to those used for evaluating all other school work. These criteria have been derived by examining adult activities to find out the types of activity for which school training is needed, and then examining school courses to find out if, when, and how such training is or can be given.

When one examines adult activities to find out the types of reading used in them, several aspects of reading come to one's attention. In the first place, the investigator finds that the adult who reads efficiently is one who has a vocabulary adequate for the subject matter to be read. Besides, he finds that the efficient reader knows many ways of economizing his reading time. In the next place, he finds that

[1] Charters, W. W. *Curriculum Construction*. Reprinted by permission of The Macmillan Company. 1923. Pp. 149–150.

efficient readers sometimes read for pleasure and sometimes for profit. In addition to these discoveries, one finds that reading ability is essential in all grades of school work; therefore, one may conclude that among the several values of reading is that of enabling children to continue with profit any academic work which they may reasonably be expected to pursue. The use made of reading in connection with academic work is, like the reading of adults, dependent for its efficiency upon the control of an adequate reading vocabulary and of correct habits of reading. Finally, academic reading, like adult reading, is sometimes for pleasure, and sometimes for profit.

The vocabulary needs of readers have already been canvassed in Chapter II. It was there shown by means of Thorndike's study that children, by the time they reach the high school, will find use for a vocabulary of 10,000 words and that extensive reading upon the part of an adolescent or adult would require an even greater vocabulary. Reading material has social worth when it aids in the development of this vocabulary.

In Chapter VI there is a review of the reading carried on by elementary- and high-school pupils. This review shows that there is a strong demand for light, entertaining reading matter, but that there may be developed in many readers an interest in informational reading material. The extensive reading within the secondary-school pupil's interests points to the need for training in a variety of forms of reading. This training, when it enables the pupil to select wisely and read efficiently, has great social value.

The criteria for judging the social worth of reading may be summarized as follows:

Reading has social worth when it is —
A preparation for later school work
Preparatory for adult activities

Essential in training one to read efficiently the literature of one's vocation
Essential in training one for general informational reading
Essential in training one for discriminative reading for enjoyment.

Forms of reading required by the criteria of social worth. In the preceding paragraphs frequent reference has been made to certain types of needs and to the training appropriate for meeting these needs. In what forms of reading must training be given in order to meet these demands? An answer to this question has been derived from analyses of the problems of reading by different groups of teachers.[1]

Forms of Reading

A. Silent reading (stated in part as purposes of reading)
1. Reading of material ranging from easy to difficult for practice in the art of reading, speed, accuracy, enlargement of general or technical vocabulary
2. With directions
3. Without directions
4. With definite purpose
5. Without definite purpose
6. To obtain directions from book, blackboard, or work sheets
7. To get main outline
8. To get central ideas
9. To evaluate points
10. To originate points about a given topic
11. To reproduce

[1] Acknowledgment of indebtedness is made to Dean William S. Gray, of the University of Chicago, to C. J. Anderson, of the State Department of Public Instruction, Madison, Wisconsin, and to the high-school teachers of West Allis, Wisconsin.

12. To extend information, general or specific; new problems, collateral reading, review, dictionary work
13. Visualization of what is read about
14. Re-reading to get meaning or significance of an obscure passage
15. To increase interest; for pleasure; to obtain emotional reaction
16. Collecting data for answering questions; problem-solving; reorganizing into a new form; reproduction in part (with discrimination and reorganization); reproduction as a whole
17. Critical evaluation; comparison as to accuracy, point of view

B. Oral reading

1. When accuracy is the measure of efficiency
2. In concert
3. When attaining certain results in the listener
4. To enhance one's attention

An examination of these forms of reading shows that many of them are closely related and can be taught simultaneously. For example, one can read for practice in speed and accuracy, and at the same time follow directions, get the main outline and central ideas, evaluate the points, and so forth. Indeed, such correlations are necessary if the best possible results are to be achieved.

The relation between these forms of reading and the criteria of social worth are indicated in Table XXXVII. This table is to be read as follows: Reading for practice in speed, accuracy, and enlargement of vocabulary is of value when judged by any of the criteria; reading with directions gives training which has value when judged by all the criteria except the fifth. The table shows the great importance of the many forms of silent reading and the limited service rendered by oral reading.

TABLE XXXVII

The Social Worth of Different Forms of Reading

(*Inc.* denotes that a form has only incidental value as judged by a criterion; a check (√) indicates that a form has significant value; a question mark indicates that the value is questionable)

Forms of Reading	Criteria for Judging the Value of the Different Forms of Reading				
	Preparatory for later school work	Relative to adult needs	Training in vocational reading	Training in general informational reading	Training in discriminative reading
	School	*Adult*	*Vocation*	*Information*	*Enjoyment*
Silent Reading					
Reading for practice in speed, accuracy, and enlarging of vocabulary	√	Inc.	Inc.	Inc.	Inc.
With directions . . .	√	√	√	√	—
Without directions . .	√	√	√	√	√
With definite purpose .	√	√	√	√	—
Without definite purpose	√	√	Inc.	√	√
To obtain directions .	√	√	√	√	—
To get main outline . .	√	√	√	√	√
To get central idea . .	√	√	√	√	√
To evaluate relatively important points . .	√	√	√	√	√
To originate points . .	√	√	√	√	Inc.
To reproduce	√	√	√	√	√
To extend information .	√	√	√	√	Inc.
Visualization of what is read	√	√	√	√	√
Re-reading to get meaning clearly	√	√	√	√	—
Collecting data . . .	√	√	√	√	Inc.
Critical evaluation . .	√	√	√	√	Inc.
Oral Reading					
For accuracy	√	?	?	?	—
In concert	√	—	—	—	—
Reading to other persons	√	√	?	?	√
To enhance attention .	?	?	?	?	?

The table does not, however, aim to show the relative values of the forms of reading or that oral reading has no value. The value of oral reading in enabling the teacher to measure the accuracy of her pupils' reading is essential to progress in the early grades. Likewise, reading to other persons is of great value to certain individuals, although such reading is little used by the majority of persons. As a social value this form of reading has been greatly overemphasized in the past. Some readers resort occasionally to oral reading to enhance their attention to what is read; in the case of persons who have habituated themselves to oral methods as have pupils trained in Hindu and Chinese schools, this form of reading is probably essential for holding the attention upon what is studied. Little time need be spent, however, in mastering oral reading for this purpose; other more effective and more economical methods of holding one's attention to what is being read are now applied in training pupils for silent reading. The training of children to read in concert can be justified by the fact that such reading constitutes an important portion of religious services; this form of reading can, however, be sufficiently mastered by the incidental training commonly given to pupils, and need not receive much attention in the organization of courses in reading.

A different showing is made by the forms of silent reading. Few of these forms lie outside one's daily needs as a student or as an adult. The first form, that of reading for practice is, of course, incidental for most adults so far as purpose is concerned, but its secondary importance may, nevertheless, be very great. A group of forms of reading with directions, with definite purpose, to obtain directions, to get the main outline and central ideas, to originate new points in one's mind, and to collect data — all these forms are employed whenever one resorts to the printed page for

information about one's work or about other topics of interest. The common characteristic of these forms is *purpose* in the mind of one who employs them. The printed or typewritten directions sheet is common to nearly all forms of employment and civic duties; the accurate reading of such material is so indispensable as to warrant specific school training in such reading. Newspaper, as well as vocational, reading also consists largely of a combination of these forms; the necessity for efficiency in these forms demands careful planning of practice in them.

Reading for the purpose of reproducing the content of what is read as a whole or in part, constitutes a large part of all reading. In school, this form of reading has value, as we shall see in Chapters XI and XII, in measuring the progress of pupils. Both in and out of school this form enables readers to converse intelligently about what has been read. Any legitimate means for cultivating a pupil's ability in the organization of what he reads so that it can be reproduced has, therefore, a place in the course in reading.

Reading for enjoyment occupies so large a place in the lives of readers of all ages that it deserves specific training. Chapter VI has shown that too large a part of such reading is conducted on a low level. Too much of the time given to pleasure reading might as well or better be given to the movies; the content derived therefrom would be similar in quality and greater in quantity. To be of the greatest possible social worth, such reading should perhaps be devoted in part to light reading, but another part, and perhaps the larger part, should be spent in reading material whose content is both entertaining and valuable. Certain works of fiction and well-written informational reading should have a place in one's reading; but as we have seen in the preceding chapter, children need little, if any, specific

training for the reading of most of the fiction which they now pursue. The character of the reading now engaged in by many readers points clearly to the need for specific training in the use of the world's varied literature and not to a continued satisfaction in having both children and adults merely read that which interests the untrained reader. Reading for enjoyment has, therefore, been granted a place of importance, not because of the value of such reading as now pursued, but for the value that such reading would have if courses in reading and literature were so organized as to provide adequate training in reading which is both profitable and enjoyable.

A sufficient treatment of the different forms of reading has been given to suggest their main characteristics and importance. As a result of the social importance of these forms of reading, supervisors and teachers face a problem which is both real and difficult. This is the problem of overcoming the difficulties encountered by pupils in the mastery of these forms. Chapter X will be devoted to investigations of the ways and means by which such difficulties can be overcome. The remainder of the present chapter is devoted to investigations which have been primarily concerned with the social worth of reading materials.

Preparation for adult activities by reading and literature. Children face the problem of preparing for adult activities. Owing to the fact that children are only partially conscious of this problem, educative processes which contribute directly to adult life must be provided. Such processes may be, theoretically, either simplified forms of adult activities or forms of children's play which resemble more or less the activities of adults.

If simplified forms of adult activities be taken as subject matter for instruction, some special means must be invented

to insure children's interest in and attention to the subject matter. One of the important forms of adult activity is reading. But the reading of adults cannot be taken over as training material for children until after certain alterations of it have been made. Instead of newspapers, technical works, commercial reports, and popular novels, there must be miniature forms of this subject matter for children. Besides, there must be training in the use of symbols of reading. That is, in learning to read, the child must be provided with an interesting setting for mastering symbols which are in themselves of little interest. In Chapter III we have seen that for many centuries children were taught to read by means of more or less interesting devices which were used to aid children in the mastery of the symbols of reading. Although that formula was often effective, it lacked two important characteristics. In the first place, the subject matter itself lacked appeal. Next, excessive drill upon the symbols of reading necessitated a neglect of worthy subject matter.

If forms of play which are similar to the activities of adults be taken as subject matter for instruction, care must be taken lest children neglect the more important aspects of the play. If forms of play which will further children's growth in reading ability are sought, what forms can be found? A search may be started by examining related forms of children's play. Among the forms of play that are related to reading are story-telling, and listening to stories. If story-telling and listening to stories can be utilized in training children to read, then, these forms of play are socially worth while. The formal discussion of the methods of teaching reading may here be anticipated by stating that children have been taught to read by beginning with story-telling and listening to stories. That is, teachers have told stories to children and later induced

them to read the same stories. Children thus readily perceive that, if they learn to read, they can read the stories in which they take delight. In so far as this appreciation of the value of reading is impressed upon children, and subsequent practice in reading obtained, the play of children provides a ready means of preparation for adult activities, and has, therefore, social worth.

It is not maintained that all training in reading can be provided upon the story-telling level. On the contrary, if children's training in reading is entirely upon this basis, both interest and skill in the reading of other kinds of subject matter is neglected — a consequence which has already been discovered by investigators of pupils' reading. Nevertheless, the formula which calls for the utilization of children's play will hold, because children's interests, like those of adults, are centered upon doing things. Therefore, if reading matter can show them how to do things, or tell them how other persons have performed interesting feats, the interests of children can be utilized in teaching them how to read non-fiction effectively.

Instead of using exclusively either simplified forms of adult activities, or forms of play which resemble adult activities, a combination of these two kinds of subject matter can be used. Such a plan is similar to that employed in physical education courses; in such courses, games (forms of play) constitute a large part of the subject matter, but there is also a considerable amount of formal corrective and specializing drill (simplified forms of adult activities). Similarly in English composition the teacher utilizes the pupils' narrative tendencies and at the same time gives specialized drill upon the more difficult, formal technicalities of writing. All such plans indicate that teachers have accepted a modified form of an ancient saying: Experience is a dear teacher, but *children* learn by no other.

What experience is appropriate for the teaching of reading? Modern educational theory holds that experiences are valuable in proportion to their gripping power. Experiences which grip the attention not only carry the learner over difficulties which would be insurmountable with uninteresting subject matter, but also motivate pupils so that they will submit themselves to drill which would be listlessly endured except for the interest that keeps attention strong throughout the drills. As measured by this standard, the teaching of reading is effective when it (1) provides content which the pupil can relate to interesting imaginative or real activities, and (2) proceeds in its formal aspects by means of content which is made interesting by the devices used therewith and by the desire which pupils have to master a technique worth while to them as pupils.

How the relation between the subject matter of reading and literature courses and adult activities has been investigated. The problem of organizing reading courses so that they will prepare for adult activities and therefore be socially worth while depends partially upon the methods, and partially upon the subject matter used in teaching. This chapter is directed particularly to the subject matter. Several investigations have been made for the purpose of discovering whether or not there is a close relation between the subject matter of reading and literature courses and adult needs. These investigations have been of three kinds: (1) An examination of the content read in school to find out its informational value, and to find out whether informational content is interesting to children; (2) to discover, if possible, ways for raising the general level of literary enjoyment; and (3) to find out the different kinds of content — either informational or literary — contained in school readers.

Investigations of the informational value of literary selections. The social worth of literary selections is dependent in part upon their informational content. By "the presentations of persons acting in accordance with the demands of conditions new to the pupil, an attack is made early in the educative process upon the tendency toward a merely local or provincial outlook upon life." [1] One of the purposes of literary teaching is, therefore, "to broaden the mental experience by supplying a sympathetic acquaintance with scenes in various geographical sections." [1] In order to discover the extent to which the books recommended by English departments of high schools aid in accomplishing this purpose, Miss Koch examined 4,025 books which appeared in thirty-five reading lists. Of the ninety-seven books mentioned on fifteen of the lists, nine were found to have no geographical significance, "forty of them pictured the United States, twenty-six England, five France, four Canada, three Scotland, two Italy, and two Palestine. One book of travel furnished brief glimpses of Europe. Alaska, Germany, India, Persia, and Spain each had one book respectively, while Ireland, Sweden, Russia, Japan, and China, to mention only a few of the omissions, were not revealed at all.

"Nearly one-half the books are books with an American background, and nearly one-third of the books picture England. Other countries receive a very meager treatment or are omitted altogether. This indicates the fostering of a provincial, small-group attitude. It suggests that while we talk of the development of cosmopolitanism, of world-group consciousness, we are really cheating ourselves. We like to think we are developing a wider outlook,

[1] Hosic, J. F. (compiler). *The Reorganization of English in Secondary Schools.* United States Bureau of Education Bulletin 1917, No. 2, p. 45.

and the statement of one aim is devoted to it in the course of study for English, but the books which are commonly recommended are not chosen with the accomplishment of that end in view." [1]

In the article from which the foregoing passage is quoted, Miss Koch summarized also the results of an examination of the entire list of 4,025 books. She found that the United States, England, and Scotland are revealed with at least fair adequacy, but that other important countries, including our nearest neighbors, Canada and Mexico, are not well revealed. In spite of the importance of South America to our commercial interests, only seven of the 4,025 books have their setting in that continent.

The findings of this investigation show that the present-day book lists are inadequate for meeting the demands made by the Committee on the Reorganization of English in Secondary Schools. The discrepancy between the aim and the school practice constitutes, as Miss Koch asserts, a challenge to persons who organize courses in literature. She closes her discussion by suggesting that the reading lists be revised with a view to adding books which will aid in broadening the pupil's geographical horizon.

If Miss Koch's method were used for judging the effectiveness of book lists in providing reading in other important fields, similar results would doubtless be found. Anyone who has had even slight experience in examining school libraries can testify to the inadequacy of the schools in providing a miscellany of reading.

In order to estimate the amount of historical content in poetry, Sue Hutchinson Dodd examined the 118 English poems required for entrance to the University of Illinois in

[1] Koch, Hazel E. The Value of Books Recommended for High-School Students in Widening the Geographical Horizon. *School Review*, XXX, 195. March, 1922.

1918.[1] This difficult task was conducted by tabulating the reference to the following classes of historical data: *character*, *event*, *place*, *social class*, *symbol*, *institution*, *date*, *document*, *people*, *principle*, and *established fact*. Table XXXVIII summarizes the references to historical characters.

TABLE XXXVIII

Distribution of the Nationalities of the Characters to Whom Reference is Made in 118 English Poems
(Data adapted from Dodd)

Nationality	Number of References	Nationality	Number of References
English	27	Greek	5
American	23	Macedonian	4
Scotch	17	Persian	3
Roman	17	Swiss	2
Italian	15	Spanish	1
French	10	Egyptian	1

An account of this investigation of the historical content of poetry is included not because all historical data have great social importance, but because it is socially important to extend one's historical horizon just as it is important to broaden the geographical boundaries of one's thinking. It is recognized also that the main purpose of these poems is not to present historical data. It is necessary, however, to find out all the values which accrue from subject matter before a final evaluation of it can be made. The cumulative value, therefore, of geographical or historical references must be considered in a general account of social worth.

[1] Dodd, Sue Hutchinson. History in Poetry. *Journal of Educational Research*, IV, 294–300. November, 1921.

The conclusion of the study of poems is that if pupils become interested in these poems, the study of historical references may follow as a natural result. In so far as such study is pursued and the historical data are of social worth, so far, at least, will the reading of these poems be of social value. Of course, it is not maintained that these are the only kinds of social value that accrue from the reading of fine poetry, nor was the investigation here reported undertaken for the purpose of setting forth any exclusive social values of poetry.

Children's interest in socially worth while subject matter. The possibility of using in reading classes material which is designed especially for the purpose of giving socially valuable information should be considered at this point. In order to determine whether or not such material can be used with success, Judd sent a questionnaire to teachers who had used the *Community Life Series* in their classes.[1] Also, the same civic lessons were presented to junior high-school pupils as described in Chapter VI.

The comments of teachers and pupils indicate clearly that these selections can be used to advantage in presenting information as well as for training pupils in reading. These selections are, however, to be distinguished from many of the traditional informational selections, because these civic lessons not only provide information, but also present it in an interesting manner. An analysis of traditional informational selections shows that they, on the contrary, present information which in many cases is of little interest, and that they present this either incoherently or in a style intended for adults.

[1] The results of this questionnaire are reported in Uhl, *op. cit.*, Chapter VII. Also, see W. L. Uhl, The Interest of Junior High-School Pupils in Informational Reading Selections. *Elementary School Journal*, XXII, 352–360. January, 1922.

In this connection attention may be called to the small amount of space commonly given in histories, geographies, or supplementary readers to such topics as are treated in the informational selections under discussion. These topics include inventions, manufacturing, mining, roads and transportation, fisheries, and the cost of living. Textbooks designed for informational courses are quite as remiss in this matter as are readers. Both tend either to neglect these topics or to present them in unsuitable form.[1] Without questioning the value of the material in most textbooks, it is obvious that books could be written upon topics now receiving only the slightest treatment in school texts, and that such books, if well written, would meet with almost unanimous approval of both pupils and teachers. Such informational accounts might be extensive, though elementary, and still supply pupils with no more material than they may well be expected to read.[2]

An investigation of the content of school readers was conducted in 1920 by Professor Starch.[3] His method consisted of an analysis of the contents of ten textbooks used in each of the eight grades. The books analyzed were believed to be fairly representative of current and recent readers. Table XXXIX gives a summary of the results and reads as follows: The first ten readers devote 28.8 per cent of their space to "Animals," 16.8 per cent to "Boys and girls," 15.4 per cent to "Folklore," and so on.

[1] Bobbitt, J. F. *The Curriculum*. Houghton Mifflin Company, 1918. Pp. 110–111. The author presents a table showing the amount of space given to these and many similar topics in elementary- and high-school histories now in use.

[2] Bobbitt, J. F. *What the Schools Teach and Might Teach*. The Survey Committee of the Cleveland Foundation, Cleveland, Ohio. 1915. Pp. 27–29.

[3] Starch, Daniel. The Contents of Readers. *National Society for the Study of Education, Twentieth Yearbook*, Part II. 1921.

TABLE XXXIX

Average Percentage of Each Class of Material in Ten Readers of Each Grade [1]

Class of Content	Grade							
	I	II	III	IV	V	VI	VII	VIII
Animals	28.8	21.5	10.0	9.2	7.9	3.6	1.3	2.5
Boys and Girls	16.8	18.5	13.1	10.5	9.6	5.8	1.4	0.0
Folklore	15.4	13.3	2.1	1.7	4.1	0.1	0.7	1.2
Fables	3.4	5.4	8.4	2.7	0.4	0.1	1.4	0.0
Plants	5.8	4.1	7.1	0.5	0.4	1.7	0.0	0.2
Elements (Wind, Water, etc.)	2.4	1.2	4.7	1.8	0.4	1.0	6.2	1.4
Fairy Tales	1.9	13.3	15.4	12.4	4.1	1.8	3.5	0.0
Plays and Games	1.9	0.1	2.7	0.3	0.7	1.6	2.0	0.0
Classics	0.7	0.5	2.2	10.7	15.3	24.4	3.2	34.1
Geography and Travel	0.6	0.1	4.6	1.9	3.0	4.7	5.8	3.3
History and Patriotism	0.3	1.0	10.1	7.0	12.4	17.4	20.4	9.8
Myths	0.0	0.0	0.3	5.7	1.2	0.1	1.2	0.5
Conduct (Manners)	0.0	0.2	1.2	7.2	0.5	4.1	0.4	2.0
Biography	0.0	2.1	1.1	4.5	2.5	2.7	5.2	9.4
Adventure	0.0	0.0	1.2	2.1	9.4	1.2	11.7	1.5
Poetry	15.4	17.4	13.4	15.5	21.3	26.5	25.8	28.4
Miscellaneous	6.7	0.8	2.2	6.0	6.4	2.5	9.2	4.4

The table shows wide differences between the content for the different grades. The space devoted to stories of boys and girls declines from 16.8 per cent in Grade I to zero in Grade VIII; while the space given to the classics rises from zero in Grade I to 34.1 per cent in Grade VIII. If one should take the percentages of pages devoted to the different types of content in Grade VIII as representative

[1] Starch, *op. cit.*, p. 147.

of the reading of children in that grade, he would find little except " poetry " and " classics " in this reading; science and invention seem to be unworthy of mention in spite of their obvious value to the twentieth-century humanist. By combining the percentages devoted to geography, travel, history, and biography, a fair showing, 22.5 per cent, is made for certain forms of informational reading. The pity is that teachers have reported that this particular informational reading is so undesirable that it should never have been included in any school readers.[1] Only one conclusion is to be drawn from this analysis of the content of readers: compilers of readers have seldom given the slightest consideration to the desirability of including a miscellany of socially worth while and well-written content.

Another way of obtaining information about the social worth of literature consists in obtaining from pupils an evaluation of their work in literature classes. This method was applied to the junior high-school pupils of West Allis, Wisconsin, in connection with the investigation discussed in Chapter VI. These pupils were asked what benefits they had derived from their favorite books. Table XL summarizes the responses of slightly less than 500 pupils to this question (some pupils named more than one benefit). The relative values are of course true for only this group of pupils; the most desirable values may or may not have been derived by the pupils, or may have been neglected when the pupils wrote their responses. This table shows at least that these pupils report legitimate benefits; in so far as the reports are true, therefore, the pupils are interested in socially worth while literature.

Reading and recreation. Present-day recognition of the need for recreation is manifest in every community. Recreation is no longer looked upon as an indulgence which

[1] See pp. 146 ff. for a report upon this material.

TABLE XL

Benefits Which High-School Pupils Claim as a Result of Studying Their Favorite Books in Literature Classes

Benefits	The Number of Responses from Each Grade			Total	Relative Frequency of Each Benefit
	VII	VIII	IX		
Interesting information	70	68	60	198	37
Stimulation of thought	24	30	16	70	13
Moral and religious	15	23	19	57	11
Understanding of life	1	20	18	39	7
Recreation	13	6	16	35	7
Examples of correct English	4	17	12	33	6
Increased knowledge about nature	11	8	7	26	5
Various intellectual and emotional reactions	10	6	7	23	4
Social lessons	12	8	2	22	4
Enlargement of vocabulary	4	2	9	15	3
Literary appreciation	1	4	3	8	2
Inspiration for composition	0	4	2	6	1
Total for all grades				532	

may be tolerated. The playground movement is one of the clearest evidences of a positive attempt not only to allow, but also to encourage both adults and children to participate in wholesome recreation. No longer need one apologize for playing; on the contrary, apologies are expected from him who abstains from play.

Among the arguments for play, the most cogent is that which asserts that wholesome recreation has great social value. The social worth of recreation has several forms; first, physical play contributes to the physical well-being; second, play or enjoyment is exhilarative and recreative in its effect upon the mental well-being; third, recreation is

often carried on by groups of persons and produces a desirable social effect by encouraging wholesome social interaction; fourth, wholesome recreation is a strong deterrent from undesirable activities; and fifth, recreation exerts a positive control over much of our thinking and conversing.

When the social worth of recreation is examined with reference to reading and literature, the contribution of literature to social values is clear. Although there are no scientific data to prove that reading for enjoyment has a beneficial effect upon mental well-being, no careful observer of human traits doubts that such an effect is so produced. Many adults find in their reading not only a pleasant retreat from their workaday affairs, but also a means for restoring themselves to a condition which admits of further work.

Whenever individuals coöperate in the reading or dramatization of literature, social interaction necessarily accompanies the activity. Besides the social value which such activity may have in itself, it has additional value if the content upon which the group works is worthy. Reading clubs, dramatic societies, and other groups in which literary products are read, produced, or discussed have values for the members of such clubs and often also for the communities in which the members live.

Although it is important to deter certain individuals from undesirable activities, it is preferable here to emphasize the positive control which recreation exercises over one's thinking and conversing. Psychologists have recently emphasized the importance which reverie assumes in one's daily life. In many psychopathic individuals a train of thought caused in part by literary activities has been found to continue for years as a dominant force. Sometimes this train of thought causes one to be in a state of constant dread lest some dire calamity will befall one. In a few

cases, the reverie has induced an ecstatic mood which persists in spite of untoward conditions.

One need only offer a penny for a neighbor's thoughts to discover the importance of reverie in the mental life of normal adults or children. How much of reverie is a resultant of literary forces, no one knows; the amount varies with the individual. The person who lives with books is sometimes little more than a book, and his conversation may be accurately described as a book review. Teachers and supervisors do not, of course, wish to produce an army of psychopathic cases or an over-bookish populace. These cases have been cited merely to show the possibilities which result from more or less carefully directed literary activities.

The testimonies of individuals as to the effects of their reading are so frequent as hardly to warrant one's calling attention to them. Nearly every great man has at some time been asked for a list of his favorite books, and has responded with an additional statement in which he has set forth the importance of the books in his own life. We need not content ourselves with such evidences of the importance of the reading of fine literature. We have objective evidence of the importance of such reading in the orations and books of famous men throughout the modern era. For example, we find much of Boccaccio in Shakespeare, much of Hazlitt in Stevenson; so replete are certain books with literary references that a single book becomes a miniature library. Likewise, the everyday conversation of the literate world shows clearly the influence of books and reading.

Three of the recreational values have been emphasized as important social results of reading and literature: the exhilarative or recreational effect of enjoyment upon the mental well-being; the valuable social interaction produced by

literature when studied, produced, or discussed by groups of individuals; and the positive effect of literature in controlling one's thinking and conversing. A fourth recreational value, the enjoyment of wholesome reading as a deterrent from undesirable activities, has been mentioned as an incidental and oftentimes important result of reading. As a consequence of conceding these social values of reading, consideration will be given in Chapter X to the training necessary for attaining these values; for no one who has observed carefully the leisure occupations of adults can doubt the need for training in the habits of harmless enjoyment.[1]

Summary. Reading material, in order to be of social worth must be interesting to the child and impel him toward an objective which is socially desirable. Socially desirable objectives satisfy the following requirements: Reading and literature courses should be (1) preparatory for later school work; (2) preparatory for adult activities. Investigations have shown that these requirements have not commonly been met by courses of study. The conclusion of investigators as well as of the present chapter is that persons who select and organize courses in reading and literature should plan the courses more wisely than their predecessors commonly planned them. Such courses should be planned with a view to meeting many social needs instead of meeting a few social needs. A miscellany of materials should be employed in order to meet the many social needs. A course in reading and literature which is socially worth while contains a carefully selected and organized miscellany of materials.

[1] *Cf.* Parker, S. C. *Methods of Teaching in High Schools.* Ginn and Company, 1915. Chapter X.

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PART II

HOW INVESTIGATIONS OF READING PROCESSES AFFECT THE SELECTION AND ORGANIZATION OF COURSES IN READING AND LITERATURE

CHAPTER VIII

THE OBJECTIVES OF COURSES IN READING AND LITERATURE

How objectives determine the character of courses in reading. Although *The New England Primer* was not written until the end of the seventeenth century, its content was determined long before the beginning of that century. For the Council of Mainz had decreed in the year 813 that children should be taught religion. The religious aim of education then advocated persisted until the seventeenth century when Luther and Calvin gave form not only to Protestant thought, but also to the content of early Protestant instructional materials. So complete was the acceptance of the religious motive in the formulation of early courses of study, that the German school primer was called *Fibel*, which signifies a little Bible.

Alongside the religious objective of instruction, there grew up in the seventeenth and eighteenth centuries a secular objective. This secular objective was a direct outgrowth of the commercial expansion and the development of scientific thought during those centuries. Like the period of religious revolution, the period of commercial and scientific breaking away from the old ways made itself felt in the organization of school courses. We can, therefore, maintain that the content of the famous Webster

Spelling-Book and Reader, although written in 1782, was determined by the movement toward the secularization of interests.

A century later, a third influence made itself distinctly felt. Indeed, as early as 1850, when the McGuffey readers appeared, the need for broad literary contacts was recognized. Fine literature was not, however, the chief component of school readers until the publication of the *Heart of Oak* series in the latter part of the nineteenth century. This literary content was used because of the belief that fine literature " is one of the most efficient means of education of the moral sentiment as well as of the intelligence." [1] Following upon this series of readers came many supplementary readers, the outstanding aim of which was to utilize fine literature as a means for developing skill in reading and strength of character.

During the period in which literary readers were supplanting the more mechanical readers of the preceding period, a new movement was gaining force and recognition. This fourth movement which led, by 1915, to a demand for a division of reading into the teaching of skill in reading and the teaching of literary appreciation, began within the recesses of psychological laboratories. Only after years of investigation by means of laboratory methods of studying reading and educational tests for measuring the results of teaching reading was it possible to convince the educational world that the course of reading should consist of the development of specific and general abilities, and that these abilities can best be attained by specific teaching. These investigations not only paved the way for a new approach to reading, but also led directly to the formulation of a new set of objectives for the course in reading. No longer

[1] Norton, C. E. *The Heart of Oak Readers*. D. C. Heath and Company. 1899. Book II, p. viii.

could teachers remain complacent while their pupils mastered oral reading processes and neglected other more practical processes. Teachers were asked to face about and train abilities which had hitherto been worse than neglected. The group of objectives which developed from this movement led to a bifurcation of reading into the development of reading technique and the study of literature. In the development of the technique of reading, silent reading has been emphasized, particularly in the later grades, and appropriate material and methods therefor compiled and organized. Parallel with this training in technique has developed the course in literature.

The fourth method of deriving objectives stands in marked contrast with the three earlier methods. In the first place, this method requires not that there be an all-embracing, general motive for reading; instead, it recognizes the possibility of all the earliest general motives and of changed conditions which require new and additional motives. Another type of contrast between the four approaches to the problems of reading appears when one examines the uses made of the general motives formulated. In each of the three earliest cases the objectives dealt primarily with subject matter: religion was to be furthered by books which contained biblical and ritualistic subject matter; secular interests were to be advanced by the use of content dealing with secular affairs; literary appreciation was to be developed by means of fine literature. Method was left to the haphazard experience of teachers and the inadequate educational philosophy of the times. All three of these examples of emphasis upon subject matter illustrate early educational philosophy, particularly nineteenth century Herbartian philosophy. The fourth or scientific method of deriving the objectives of reading has, it is true, affected the content of school

courses, but it has affected quite as much the methods of using the content. For example, recent educational literature has been characterized by applications of scientific results to the processes of teaching reading. In fact, one must needs search long for a finer example of the application of scientific principles to theory and practice than that portrayed by modern developments in reading.

The discussion of the four periods in reading emphasizes first, the importance of educational objectives, and, second, the contrast between the theoretical and scientific attempts to solve educational problems. The remainder of this chapter is devoted to a discussion of the consequences of the fourth period in our development, namely, the period in which scientific investigations of reading are relied upon in the formulation of the objectives of courses in reading and literature.

The objectives of present-day courses in reading and literature. The objectives of courses in reading and literature as based upon recent investigations are three in number: (1) the control of the mechanics of reading; (2) ability to comprehend and interpret what is read; and (3) the attainment of general culture through the ability to enjoy literature. In order to comply with scientific findings, it has been necessary not only to restate the objectives of reading, but also to determine their relative importance, the methods of attaining them, and the relative amounts of time and emphasis required by each. That is, the teacher may not content herself by saying that pupils should be taught only to comprehend what they read; she must also determine the demands to be made upon her pupils' powers of comprehension, and then so adjust their training that the demands of all legitimate objectives will be met.

The control of the mechanics of reading includes (1) the power to recognize words rapidly and accurately in both oral and silent reading, and the correct pronunciation of words which occur singly or in passages; (2) the cultivation of rapid reading; (3) the development of expressional abilities such as proper inflection, pitch, and tone; (4) the development of skill in different forms of silent and oral reading, as careful reading of technical passages, rapid reading for pleasure, or reading to get the central ideas; and (5) the enlargement of general and technical vocabularies sufficient for all the kinds of reading likely to be undertaken.

Ability to comprehend and interpret what is read includes the ability (1) to assimilate meanings rapidly and accurately; (2) to analyze and select the significant points in what is read; (3) to collect and organize data for the purpose of answering questions, solving problems, or for reproduction as a whole or in part; (4) to evaluate critically; and (5) to apply the content to situations other than those presented in the material read.

The attainment of general culture through the ability to enjoy literature requires (1) careful presentation of properly graded masterpieces to pupils; (2) that the reading of fine literature be enjoyed by pupils; (3) an acquaintance with a variety of literature so as to enable all pupils to find their favorite forms of literature; (4) training in the interpretation of problems arising from the study of literature — problems involving nature, interesting plots, interesting characters, morality, and other topics of general interest; and (5) special attention to forms of literature which are overlooked by untrained readers — fine examples of fiction, biography, travel, and books of science and invention.

The relation of investigators and teachers to the formulation of objectives. Although scientific investigators are

concerned with the formulation of objectives of school courses, they seldom become classroom teachers; only infrequently do they become supervisors. Their function is rather the discovery of modes of action than of carrying out the plans formulated. Although teachers and supervisors often carry on investigations and still more often coöperate with other persons who are conducting investigations, the real problem of teachers is that of carrying on their courses in accordance with carefully determined objectives. Professional investigators can sometimes point the way, but the classroom teacher must administer the course. Therefore, these objectives of courses in reading, though based upon the results of investigations, are in reality guide-posts for the schoolmaster.

The schoolmaster as an engineer. In principle, the teacher's problem is not unlike that of an engineer empowered to construct a bridge for the use of pedestrians, street cars, and automobiles. There can be in the engineer's mind no notion of excluding any of these three forms of traffic, nor can there be any doubt that each form requires sufficient regulation to make the bridge safe for all three. By planning a bridge for only one of these, the engineer would court disaster to all the other forms of traffic; only by giving adequate attention to each one can space, safety, and strength of construction be obtained. A bridge so constructed as to meet these needs will be still further improved by an architectural form which emphasizes its utility, and at the same time adds grace to the whole structure.

As soon as the schoolmaster turns engineer, his problem becomes that of measuring the work of different schools, and pupils taught by different methods; he compares the results of teaching when different objectives have been uppermost, and upon the basis of his findings makes recom-

mendations and plans for his own school. Exactly such schoolmaster-engineering has been practiced during the last decade; the story of the laying of the scientific foundations for it is the basis of the next four chapters of this book.

Summary. The history of modern education furnishes four clear examples of the effects of objectives upon content. During the period of the Reformation and for years afterward, the religious objective was uppermost; the content of the course of reading was chiefly religious. Later, education became secularized; at the same time reading content became largely secular. During the nineteenth century, the literary aim rose to prominence, and the content of readers was drawn from the fine writings of the greatest literary geniuses. Within the present generation, a scientific attitude has developed toward educational problems; with this attitude there has developed a recognition of the need for specific teaching of reading habits, and suitable content for this specific teaching is now appearing.

The scientific attitude is represented by three main objectives of reading and literature courses: control of the mechanics of reading, comprehension and interpretation of what is read, and the attainment of general culture. The problem of investigators consists of amplifying these objectives and placing the results of their work within the reach of teachers. The modern school requires that teachers understand these objectives, plan courses with reference to them, and employ educational measurements to determine when or to what degree the objectives have been attained.

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CHAPTER IX

LABORATORY INVESTIGATIONS OF READING PROCESSES

Variations in the rate of reading. Everyone is familiar with the variations in one's rate of reading. Many persons have trained themselves to use several different rates of reading while gleaning items of interest from the daily newspapers. The headlines and certain sensational news items are taken at top speed, items setting forth the details of important legislation or extracts from an important address are taken at medium speed, the editorials in one's favorite paper are often taken at a much lower speed. Even while one reads a single document, one's rate of reading varies. For example, a person begins a novel slowly and with care; as soon as he is oriented he hastens his speed; by the time the hero is on trial for murder, only the merest " tunneling " of the pages is required.

Why do we have different rates of reading? Some of the reasons for different rates of reading can be found by a brief analysis of the processes involved in novel reading. At the beginning of the novel the reader feels the need of certain basic data: setting, time, characters, and the beginning of the story itself. He is willing to plod through a few pages to find these keys to the main problems of the novel. Soon the characters are placed in a setting already familiar, and an unexpected or an ominous moment has brought the reader into the swing of the story. From this point, familiarity with setting, characters, and plot increases. New materials are encountered, but they are only a part of the equipment already possessed by the reader. Likewise, analysis and reorganization of ideas

continue, but these are also within the established background. The reader now plunges ahead at top speed, confident of his ability to make adjustments as the story unfolds. The condition of the reader is analogous to that of the scientist who has his problem in mind, has collected his basic data, and is now feverishly awaiting the final turn of events which will give the solution to his problem. In other words, the reader has a vital problem, and the problem makes him alert.

In striking contrast with the rate of reading attained in the midst of an exciting novel is the rate attained when one is reading content that requires careful study. Slow, careful reading such as that required by a partially mastered foreign language illustrates an extreme form of analytical reading. In reading such difficult passages as shown in later pages of this chapter, readers pass laboriously from syllable to syllable — sometimes even from letter to letter. No longer does the eye pass in long sweeps across the page. In such reading only the simplest words can be grasped during a single fixation of the eye. Furthermore, the eye does not pass directly across the page; instead, there are many backward or regressive movements.

We are able, therefore, to find widely different forms of activity passing under the name of reading. A more detailed analysis of these forms of reading shows that reading consists of a group of interdependent activities; it is found to be in part the carrying on of a number of fundamental and somewhat mechanical habits, and in part a process of interpretation of the content of what is read.

Reading is a form of interpretation. The illustration of novel reading has already shown that reading is in part at least a form of interpretation. When the content of what is read is easy or familiar, the demands upon the reader's power of interpretation are slight, and the rate of reading is

rapid; when the content is difficult, the demands are great, and the rate is slow. In general, then, there is a close relation between the rate of a person's reading and the quality of his interpretation; so close is this relation that it has often been maintained that fast readers are efficient readers. It is much nearer the truth, however, to say that in general if two persons are reading the same passage, the faster reader is the more efficient. This distinction is important because efficient readers read certain passages very slowly and other passages very rapidly, according to the nature of the content of the passages and the purposes of reading.

Reading may, therefore, be slow and interpretation complete if the content is difficult and the reader painstaking. For example, a trained expert may, on the one hand, spend many hours in deciphering and interpreting a new and difficult formula in physics. His reading may, on the other hand, be fast and the interpretation complete if he is reading easy content as a pastime. For example, this expert would require only a glance to comprehend the meaning of a popular account of the principle underlying siphons.

The difficulty of interpreting what is read affects not only the rate of reading; it affects also the accuracy of the reading. Even in the case of material which is fairly well adapted to the ability of the pupils who read it, the demands upon the readers' powers of interpretation vary and, in turn, affect the accuracy of reading. The truth of this statement is shown by investigations to which reference was made in Chapter III. It will be recalled that Miss Wilson found that certain readers whose accuracy score was high in certain types of reading made low scores when reading other types of content.

Motor habits and reading. As children develop they

are required to master various habits. Some of these habits are chiefly motor in character; others are chiefly dependent upon the so-called higher mental processes. When one masters the habits associated with playing baseball, motor habits are emphasized. In the mastery of piano-playing, motor habits are developed, but, after the early stages have been passed, attention is directed to interpretation. This interpretation consists in part of obtaining the meaning of what is played as expressed in correct accentuation and phrasing, and in part of adding to that meaning an emotional character which is not intrinsic in the musical content itself. The technique of reading consists likewise of three parts; the motor, the comprehending, and the emotional interpretation. The last two parts of reading technique have until recently quite over-shadowed all the motor aspects of reading except that of correct vocalization in oral reading.

Recent years have, however, brought forth numerous investigations of these aspects and shown how they can be developed. Although the investigation of these motor habits has required years of patient work, many of the results of the investigations can be expressed in simple, untechnical terms.

When a trained reader follows the lines of a printed page, his eye passes quickly from point to point on each line. Instead of moving slowly as the content of the page is interpreted, his eye moves by short, rapid jerks. His eye is fixated on about five or six different points on the line. Each of these fixations is of very brief duration, and the eye sweeps almost instantaneously from one of these fixation points to the next. As a motor activity, silent reading consists, therefore, of brief fixations of the eye interspersed by exceedingly rapid forward sweeps of the eye. In addition to these correct and fundamental motor habits, there

is also the habit of vocalization even in silent reading. Although vocalization is essential in oral reading, it is usually an impediment in silent reading. There is, however, slight vocalization in nearly all silent reading.[1]

Very different from the motor habits just described are those of the undeveloped reader. Instead of making a few short fixations per line, the undeveloped reader makes many long ones. Instead of making rapid forward sweeps of the eye, the undeveloped reader intersperses his forward movements with many backward or regressive movements. Instead of slight vocalization, the untrained reader employs gross vocalization, moving both the inner organs of speech and the lips. Although various defects of motor control may occur in his silent reading, the person whose habits may be described as undeveloped usually has one or more of the following bad motor habits: irregular movements of the eye — backward as well as forward movements of the eye, relatively short sweeps of the eye across the page, many eye fixations of long duration, and excessive vocalization.

Such indications of deficient control as these can be observed in undeveloped readers of all school grades. It is important that these defects be analyzed, because a part of the training of all normal children as well as the remedial training of undeveloped readers of all grades consists of acquiring correct and adequate motor controls. Two lines of investigations of the motor habits of silent reading have been conducted within recent years. One of these lines of investigation consists of the diagnostic work of individual teachers and will be discussed in Chapter XI; the other consists of investigations conducted in experimental labora-

[1] *Cf.* E. B. Huey. *The Psychology and Pedagogy of Reading.* The Macmillan Company, 1903. Pp. 117 ff. Also W. A. Smith. *The Reading Process.* The Macmillan Company, 1923. Pp. 144–150.

DIAGRAM VIII

The Silent Reading Record of an Undeveloped Reader of Grade I–A *

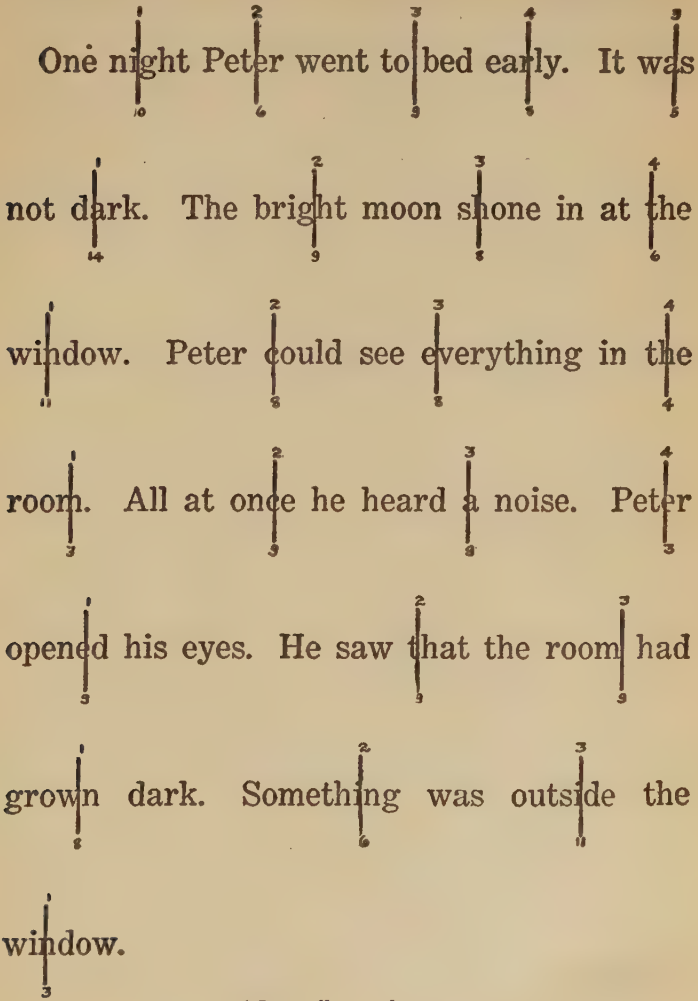
(In the diagrams of this chapter "the positions of the eye-fixations are indicated by the short vertical lines drawn across the lines of print. The serial numbers above the verticals indicate the order of the pauses; the number at the lower end of each vertical indicates, in twenty-fifths of a second, the duration of the fixation. A cross appearing instead of a number at the lower end of a vertical indicates that the duration of the fixation could not be determined with precision. An oblique line indicates a pronounced head-movement, the exact location of the fixation being at some point between the ends of the oblique.")

A boy had a little dog. One day the dog
ran into the woods. The boy ran after the
dog. He wanted the little dog to go home.
But the dog would not go home. The little
boy said, "I cannot go home without my
dog." Then he began to cry.

* Buswell, *op. cit.*, p. 2.

DIAGRAM IX

The Silent Reading Record of a Skillful Reader — A College Senior *


One night Peter went to bed early. It was
not dark. The bright moon shone in at the
window. Peter could see everything in the
room. All at once he heard a noise. Peter
opened his eyes. He saw that the room had
grown dark. Something was outside the
window.

* Buswell, *op. cit.*, p. 3.

tories. Of the latter, the most significant have been conducted at the University of Chicago.

The Chicago investigations of reading. Of the Chicago investigations, the work of Judd and Buswell is the most significant for the present discussion.[1] These men conducted their investigations by means of elaborate apparatus; this apparatus made possible the photographing of the movements of the eye and the recording of the number and duration of the eye fixations per line. Diagram VIII shows the nature of the data obtained by this photographic-timing process for an undeveloped reader and Diagram IX for a skillful reader.

By comparing Diagrams VIII and IX, one obtains objective evidence which supports the statements made in the preceding paragraphs about the differences between the motor habits of good and poor readers. Diagram VIII shows that the poor reader made twenty-five fixations while reading the first line and that the first of these fixations was of $\frac{22}{25}$ seconds duration, the second of $\frac{7}{25}$ seconds, and so on. Regressive movements are indicated by the fact that the serial numbers at the tops of vertical lines are not in regular order; for example, the child's eye advanced to the point indicated by the vertical line numbered three, and then moved backward to the line numbered four. Similar regressive movements occurred after fixations 7, 11, 13, 17, 19, 23, and 24. Diagram IX shows that the efficient reader made five fixations while reading the first line and that the fixations were of only $\frac{5}{25}$ to $\frac{10}{25}$ seconds duration. No regressive movements occurred in the reading of the entire passage. Here, then, are objective data which show that the poor reader makes many fixations per line, that

[1] Judd, C. H., and Buswell, G. T. *Silent Reading: A Study of Various Types.* University of Chicago, 1922. Buswell, G. T. *Fundamental Reading Habits: A Study of Their Development.* University of Chicago, 1922.

his fixations are of long duration, and that his eye-movements are both forward and regressive. The efficient reader is shown, in contrast, to make few fixations, to make short fixations, and to make only forward eye-movements in the reading of each line. The record of the efficient reader also shows a regularity of length of eye-movements which is lacking in the record of the poor reader.

By showing the difference between the motor habits of these two readers these plates indicate something of the journey which the undeveloped reader must travel. What the records " show is the meaning of immaturity and of maturity. When the ultimate goal of reading instruction is known, the teacher is at liberty to use whatever methods may be considered best, provided always that the final outcome is in accord with the known characteristics of maturity." [1]

"The use of eye-movement records in the analysis of reading rests primarily upon the fact that they furnish an objective symptom of the character of the reading process. Unless the attention of the reader is specifically directed to them he is entirely unconscious of their nature. Consequently, a photographic record of eye-movements is based upon a reaction which cannot be consciously modified to suit the occasion of a test. It is as difficult to modify directly one's eye-movements while reading as it is to modify purposely the character of one's habitual gait in walking A person walks in one manner when hurrying to catch a train, in another when strolling through the park, and perhaps in a still different manner when stepping to the speaker's desk upon a platform when a thousand eyes are focused upon him. His manner of walking is the unconscious expression of his whole nervous condition under such circumstances, a symptom of the purpose dominating his action. When we see a man rushing down the street we do not infer that

[1] Buswell, *op. cit.*, pp. 1 and 4.

he is taking a stroll. Furthermore, we do not confuse the toddle of an infant with the vigorous stride of an adolescent or the more dignified step of maturity. A person's walking furnishes a symptom of his stage of maturity. In similar fashion a person's eye-movements furnish an index of the general nature of his reading process, a symptom of the stage of maturity of his reading habits. When we see a person making an average of 20 fixations per line in reading, we know that he is not grasping the meaning easily or rapidly. In like manner, when we observe a person making an average of 4 fixations per line we know that he is either reading superficially or has reached a mature stage of reading. The making of only 4 eye-fixations does not cause maturity of reading; maturity causes the making of only 4 fixations per line. Eye-movements are effects, symptoms; but they are symptoms because they are themselves necessary phases of the process and hence very fundamental elements of reading. The fact that they are not subject to direct conscious control makes them reliable as a measure of reading ability." [1]

Dr. Buswell continued his experimentation so as to include a sufficient number of cases ranging from Grade I to college grade to indicate the major development of three motor habits: the length, duration, and regularity of eye movements. By tracing the development of these three habits, he found that they are developed mainly during the first four grades. He suggests that a modification of the course in reading in the subsequent grades might lead to a considerable improvement beyond what is commonly attained.

Since these motor habits constitute an important part of one's technique of reading, it is essential that courses be so organized as to facilitate their development. Training designed to cultivate these habits in normal children

[1] Buswell, *op. cit.*, p. 8.

as well as in children whose reading development has been deficient will be described in the next two chapters.

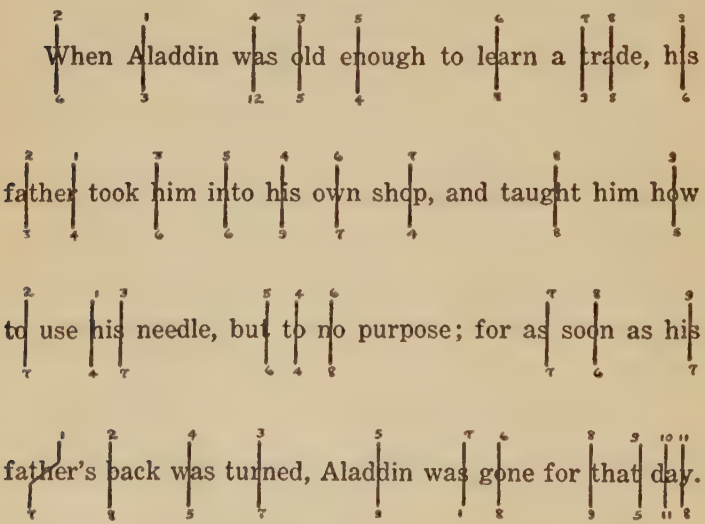
Dependence of motor habits upon the organization of the course in reading. The foregoing discussion has shown that good readers have better organized motor habits than inefficient readers. These well-organized habits of good readers can, however, be disorganized if over-difficult reading materials are presented to them. Here again we find a close parallel in piano-playing. Teachers of piano are very familiar with the musical " stammering " of pupils who have been required to practice over-difficult materials. The common characteristic of such pupils is the tendency to make repeated attempts to play the more difficult passages of their pieces. For example, when a scale passage is attempted, the pupil finds himself unable to complete the passage; then he begins the passage again and again until he gets into the swing of the movement. Pupils who are playing over-difficult piano pieces often " stammer " many times while trying to play a single piece. Although the pianist's motor powers differ from those of the reader, the psychological condition of the pupil who " stammers " on the piano is closely analogous to that of the pupil who makes regressive movements while reading. In both cases, the habits of correct procedure have been disorganized.

Such disorganization of the reading processes has been analyzed in the laboratory. For example, Subject A23, a high-school junior, read an English passage with considerable facility as shown in Diagram X; but the same subject, when reading a French passage, showed great disorganization as indicated by Diagram XI. That is, in reading the English passage very few regressive movements occurred; in reading the French passage, however, extreme regressive movements occurred as shown by the order of the numerals above the vertical lines.

Similar cases of disorganization of habits occur when subjects are asked to paraphrase or analyze an English passage. Diagram XII shows the record of the same subject while attempting to paraphrase a line. Here, her record is more primitive than that of the first-grade pupil as shown in Diagram VIII. A still different record was obtained by asking this girl to read silently and analyze a passage for peculiar words. This record, Diagram XIII, shows less disorganization than when paraphrasing was attempted, although the motor processes were again more similar to those of the beginner than to this girl's own normal processes, as shown in Diagram X.

DIAGRAM X

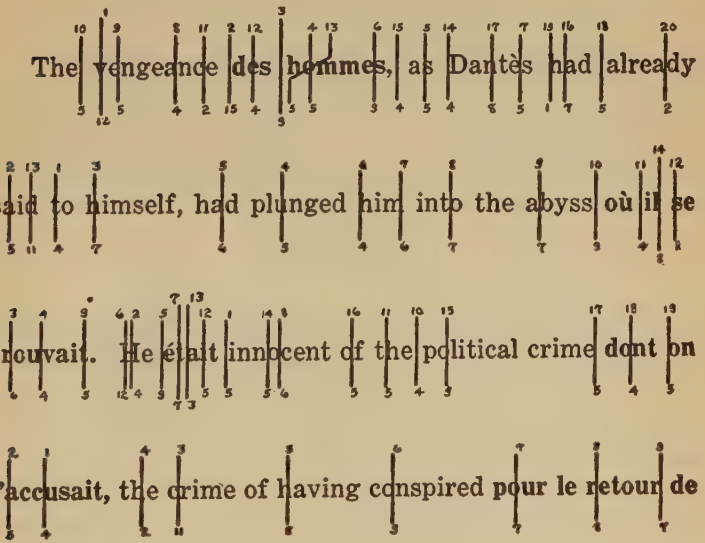
The Silent Reading Record of Subject A-23 When Reading an English Passage *


When Aladdin was old enough to learn a trade, his
father took him into his own shop, and taught him how
to use his needle, but to no purpose; for as soon as his
father's back was turned, Aladdin was gone for that day.

* Judd and Buswell, *op. cit.*, p. 109.

DIAGRAM XI

The Silent Reading Record of Subject A-23 When Reading a Mixed English and French Passage *


The vengeance des hommes, as Dantès had already
said to himself, had plunged him into the abyss où il se
trouvait. He était innocent of the political crime dont on
l'accusait, the crime of having conspired pour le retour de

The diagrams reproduced here from the reports of Judd and Buswell show clearly that the fundamental motor processes of reading are interfered with when analysis begins. The extent of interference depends upon the difficulty of the analysis attempted. This interference causes the subject to make many fixations per line, to lengthen greatly a part of the fixations, and to make many regressive movements; these are characteristics of beginners and of pupils who are deficient in reading. When such interference in the trained reader's processes occur, it is, therefore, correct to say that his reading habits have been at least temporarily disorganized.

* Judd and Buswell, *op. cit.*, p. 108.

DIAGRAM XII

The Record of Subject A–23 While Attempting to Paraphrase a Line*

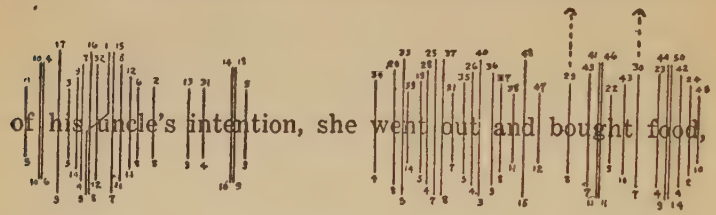
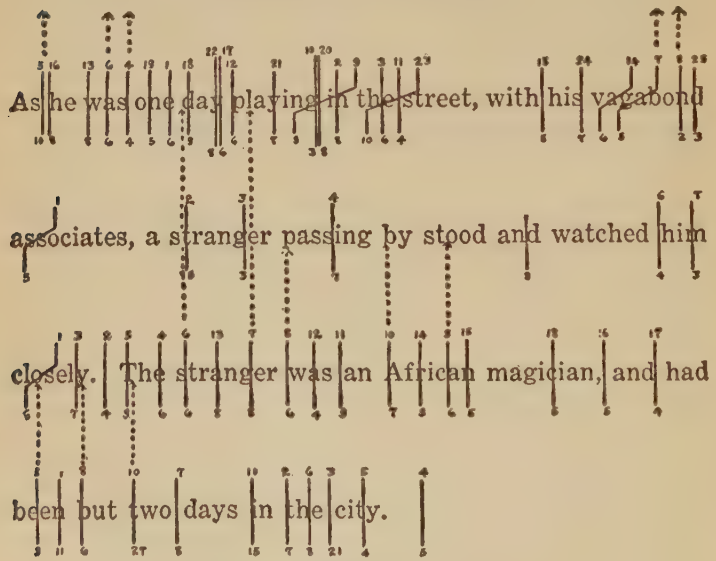


DIAGRAM XIII

The Record of Subject A–23 While Reading Silently and Analyzing a Passage for Peculiar Words**


As he was one day playing in the street, with his vagabond
associates, a stranger passing by stood and watched him
closely. The stranger was an African magician, and had
been but two days in the city.

* Judd and Buswell, *op. cit.*, p. 56.
** Judd and Buswell, *op. cit.*, p. 62.

Laboratory investigations influence both the formulation of objectives and the organization of courses in reading. It has been said of certain children that their learning is slow but sure. This statement has been applied to the learning of reading so that one frequently hears of a child who appears to be unable to master even the rudiments of reading although the child's parents insist that in time the child will outstrip his fellows. Likewise, one occasionally finds an individual who reads very slowly, and who explains the fact by saying that he prefers to read carefully rather than skim hastily over the surface.

Of course these statements are usually self-consolatory rather than scientific. Nevertheless, their implications are worth considering. In the first place, the persons who make these statements falsely assume that the pupil whose initial ability is slight will in the end excel the pupil whose initial ability is great. Besides, these persons assume that slow practice for an indefinite period is essential to ultimate mastery of the mechanics of reading. On the contrary, however, laboratory investigations have shown that alertness and speed are the prime requisites of proficiency in reading.

The present discussion emphasizes the different types of reading processes found in different kinds of reading. This emphasis has been made because knowledge of the effects of different kinds of reading upon the processes of reading is fundamental for a correct organization of courses in reading. If, for example, it were desirable to develop a halting, slow, and irregular set of activities, one might argue for courses in analysis as training in the technique of reading. If, on the contrary, it is desired to cultivate a facile, rhythmical set of activities, clearly one must argue for courses in which much rapid reading is provided.

Psychological investigations show how reading can be improved. Two interdependent, major lines of improvement in reading are possible. First, reading can be improved by correct practice in the fundamental motor processes. Second, reading can be improved by the adequate preparation of the pupil's mental attitude for the reading which he is to do. Both of these lines of improvement are as dependent upon the selection and grading of the content of reading as they are upon the methods employed in presenting this content.

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CHAPTER X

CLASSROOM TEACHING AND THE ORGANIZATION OF CONTENT

The relation between method and content. Classroom teaching is conducted for the purpose of attaining the general objectives already discussed in Chapter VIII. Those objectives are three: (1) the control of the mechanics of reading; (2) the ability to comprehend and interpret what is read; and (3) the attainment of general culture through the ability to enjoy literature. From these objectives and as corollaries to each of them are derived the social values stated in Chapter VII: (1) the preparatory value for later school work, (2) the preparatory value for later adult activities, (3) the vocational value, (4) the value for use in obtaining information, and (5) the value in training for discriminative reading for enjoyment.

Since classroom teaching is conducted for the attainment of these general objectives and social values, the forms of classroom teaching must be in accordance with them. In Chapter VII these forms were found to be of two general types, silent reading and oral reading. Instead of attempting to provide a complete manual for the development of each of the forms of silent and oral reading, this chapter will be restricted to the aspects of classroom teaching which affect directly the selection and organization of content. In carrying out this plan, a number of investigations and experiments will be reviewed, and their relation to both the forms and the content of reading shown.

Control of the mechanics of reading. ***a*. The relation of mechanics to meaning.** Until recent years much of the

training in the control of the elementary mechanics of reading was based upon meaningless content. Recent educational psychology has contended that such training, especially when designed for the primary grades, should be based upon meaningful content or at least upon material which is derived directly from meaningful content. The truth of this principle has been demonstrated experimentally. One's acceptance of this principle rules out of court certain method readers whose content for the primary grades is composed almost entirely of word drills. The principle cannot be discussed, however, without considering the whole question of the use of phonics.

Before discussing the use of phonics, three terms require definition. Although *phonics* and *phonetics* are of the same derivation and usually mean the same thing, the term *phonics* is sometimes restricted to the study of sounds, and *phonetics* to the study of sounds and the use of vocal organs in producing sounds. A *phonogram* is the written symbol of a speech sound, as *sh*, *ba*, *n*, or *er*. These definitions will be adhered to in the use of the terms in the following pages.

Unfortunately, few exact measurements of the effects of the study of phonics have been published. There are, however, a number of reports upon the value of such training. Before such reports are reviewed, it should be recognized that the location of training in phonics in the reading course, its importance, and the form of phonograms employed are debatable. Excellent ability in reading has been produced, both with and without phonetics. One must, therefore, rid one's mind of preconceived notions during a period of inquiry into the subject.

An inquiry into the practicability of a study of phonetics raises two issues: (1) the possible application of a knowledge of phonetics, and (2) the possible advantage that

pupils who have been drilled upon phonetics have over those who have not. Besides, there are two phonetic systems which are fundamentally unlike. In one of these, the traditional method, phonograms are written in the form *b-at*, *c-at*, etc.; in the other method, which may be called the natural method, phonograms are written in the form *ba-t*, *ca-t*, etc. Recent vocabulary studies enable us to examine the possible application of phonics more fully than they have formerly been examined. Several comparative studies of different methods enable us to form a tentative judgment about the effect of phonetic drills upon children.

***b*. The possible applications of a knowledge of phonetics.** (1) **Is English a phonetic language?** The only way that the possible applications of phonetics can be examined is by a vocabulary study. The questions then arising are, first, How many English words are phonetic? and second, Are many of the words of children's vocabularies phonetic? One of these questions has been answered by Burbank, the other by Washburne and Osburn.

Burbank found [1] that there are 3,381 monosyllables in the English language, 86.9 per cent of which are phonetic, like *mat*, *set*, *sit*, *cot*, and *cut*. He found also that in the polysyllabic words of the Jones list [2] covering the vocabularies of children in Grades I to III, there are 3,405 syllables. Of these 86.5 per cent are phonetic. Therefore there are identical elements in words and phonograms.

Next, it is desirable to know how many phonetic elements are required to unlock the phonetic words. How many applications has each phonetic element? How many

[1] Burbank, E. D. Phonetics in the Elementary Grades for Teachers of Normal Children. *Volta Review*, XXII, Nos. 3, 5, and 6. 1920.

[2] Jones, W. F. *Concrete Investigation of the Material of English Spelling*. University of South Dakota, Vermilion, South Dakota, 1914.

words can be learned at once? Burbank shows by the following figures the immense gains possible when a logical attack is made upon English words. Of the 2,939 phonetic monosyllabic words, 1,238, or 42.1 per cent can be pronounced as soon as 30 consonant and vowel sounds are mastered. That is, there are 25 consonant sounds in English. When there are added to these 25 consonant sounds, the short sounds of the 5 vowels, 1,238 words can be pronounced. Only 88 short vowel monosyllables are left to be taught as sight words.

Burbank's investigation shows clearly that, if pupils can be taught to see analogies and act upon them, they can profit greatly by phonetic drills. "As a matter of fact, out of every seven syllables, six are like *dun* and only one is like *done*. An overwhelming majority of the words and syllables in English are phonetic. Because one word or syllable in seven is unphonetic, shall we ignore the 85 per cent that are phonetic and teach our entire vocabulary as sight words, thus putting our language on a par with Chinese?" [1]

The possible application of a knowledge of phonetics is, according to Burbank, dependent also upon the method employed. "The blending of the consonant with the vowel is the *natural* blend. It is obviously correct, but the importance of it is emphasized because of the prevalence of wrong and unscientific methods in the schools for normal children. The sounds of the initial consonants are usually taught incorrectly — for example, *b*, *p*, *d*, *t*, *g*, and *k*, as *bu*, *pu*, *du*, *tu*, *gu*, and *ku*; *l* as *ull*, and *r* as *err*. When these initial consonants are blended with 'family' phonograms, we get monstrosities that do not even suggest the correct pronunciation of the words that are being taught: *b*(*u*) *at*, *p*(*u*)*at*, (*u*)*l and*, and (*e*)*r at!*" [2]

[1] Burbank, *op. cit.*

[2] Burbank, *op. cit.*

The traditional method overlooks the importance of the natural blend. "It is easier," says Burbank, "to make the transition from the obstructed sound of the consonant to the unobstructed sound of the vowel than to make the transition from the vowel to the consonant. This is especially marked in the case of the stopped consonants — *b*, *p*, *d*, *t*, *g*, *k*. To test this pronounce *ib*, *ib*, *ib*, etc., as fast as possible, and after a few repetitions the sound will change to *bi*, *bi*, *bi*, etc. Any similar combination like *ad*, *ad*, *ad*, etc., will give the same result. In singing we use *do*, *re*, *mi*, *fa*, *sol*, *la*, *ti*, *do*, to represent the various notes of the scale. It is obvious that these syllables would be unusable for such a purpose if the vowel preceded the consonant. Test this by trying to sing them with the order reversed: *od*, *er*, *im*, etc."

The first sounds that an infant makes are vowel sounds, such as *ă*, *ă*, or *ĕ*, *ĕ*. Later when consonant sounds are blended with these vowel sounds, the combination is always consonant and vowel, as in *da*, *da*, or *ma*, *ma*, and *pa*, *pa*. In the primitive languages, such as the Malay, every word is made up of syllables, each of which consists of a consonant and vowel, or of a vowel alone, or of two vowels, as in the Hawaiian words *Ka mi' ha mi ha'*, *Ki lan î a*, and *Ko ha' la.*

The same thing is true of other languages. For instance the Latin word *amabilis* might be pronounced *am ab' il is*, but it really is pronounced *a ma' bi lis*. This phonetic syllabication is characteristic not only of English, Latin, and Hawaiian, but of every language that is spoken. For example in the Japan-syllabary every character stands for a syllable, which consists of a consonant sound blended with a vowel sound following, as in *ka*, *ki*, *ku*, *ke*, *ko*, *sa*, *si*, *su*, *se*, *so*, etc.[1]

[1] Burbank, *op. cit.*

(2) **Is the reading vocabulary of children phonetic?** The possibilities of the use of phonetics cannot be determined unless the reading vocabulary is known. It would be futile to teach phonetics which are contained only in words which the child or the average reader will encounter. It will probably be agreed also that phonograms ought to be taught with reference to words which are likely to occur early in the child's reading; that is, certain phonograms should be taught early if many words used in the primary grades contain them, while other phonograms should be taught later if only later readings are found to contain these other phonograms. The possibilities of the use of phonics are, therefore, dependent upon the selection of phonograms which are appropriate for certain grades. Furthermore, one phonogram may be a key to many words and another to only a few words. As examples, the final *e* as in *late* has a frequency greatly in excess of final *or* as in *parlor*.

An excellent example of analyzing children's reading to determine what phonograms should be taught in Grades I and II is provided by Vogel, Jaycox, and Washburne.[1] The traditional phonetic method was used in classifying the phonograms. The list is based upon the vocabularies of ten first readers as reported by Packer in the *Twentieth Yearbook* [2] and ten more modern primers and first readers. The readers selected were *Free and Treadwell Primer*, *Free and Treadwell First Reader*, *Winston Primer*, *Story Steps*, *Work-a-Day Doings*, *Work-a-Day Doings on the Farm*, *Progressive Road to Reading*, *Book I*, *Barnes Primer*, *Barnes First Reader*, and *Easy Road to Reading*, *Book I*.

[1] Vogel, M., Jaycox, E., and Washburne, C. W. A Basic List of Phonics for Grades I and II. *Elementary School Journal*, XXIII, 436–443. February, 1923.

[2] *National Society for the Study of Education*, *Twentieth Yearbook*, Part II. 1921.

TABLE XLI

The Fifty Most Common Phonograms in Certain Primers and First Readers

(The "New List" means the list derived from books named in the discussion of this table; "Yearbook List" means the list in the *Twentieth Yearbook of the National Society for the Study of Education*, Part II, pp. 128 ff.[1])

Phonograms	Number of Book-words in New List	Rank in New List	Rank in Year-book List
Final *e*	325	1	1
ee	169	2.5	5
ed (ending)	169	2.5	7
ing (ending)	145	4	3
er (ending)	138	5	2
ea (eat)	135	6	4
an	123	7	6
ou (our)	105	8	12
en	96	9	19.5
ay	93	10	9
oo (good)	78	11	18
an	76	12	14
oo (moon)	70	13.5	21
ar	70	13.5	11
ing (ring)	69	15	23
ow (cow)	68	16.5	16
ow (show)	68	16.5	8
ill	63	18	19.5
at and *atch*	62	19	17
it	58	20.5	28
in	58	20.5	15
y (cry)	53	23	44
at	53	23	22
ai	53	23	10
en (ending)	52	25	13
ee	51	26.5	32
ea (bread)	51	26.5	39.5
all	45	28	24

[1] Vogel, Jaycox, and Washburne, *op. cit.*, p. 439.

TABLE XLI—*Continued*

Phonograms	Number of Book-words in New List	Rank in New List	Rank in Year-book List
ick	44	29.5	30
ake	44	29.5	29
or	43	31	35.5
eep	41	32.5	39.5
ook	41	32.5	38
ear	40	34.5	37
ell	40	34.5	27
op	36	36	34
un	34	37	26
ir	31	38.5	47.5
ight	31	38.5	35.5
old	28	40	47.5
ot	27	41	41.5
oa	26	42	33
ap	25	43	49
and	24	44	25
ock	21	45	43
ail	19	46	50
ed	18	47	45
on (apron)	15	48	46
ain	7	49	41.5
or	3	50	31

Table XLI includes the fifty most common phonograms in order of their frequency in the twenty primers and first readers.

"To the ranking of phonograms (as shown in Table XLI) has been added a rank of initial consonant combinations. . . . These consonant combinations are, in order of their importance, *st*, *th*, *sh*, *gr*, *br*, *dr*, *wh*, *pl*, *fl*, *sp*, *ch*, *bl*, *sw*, *tr*, *cr*, *cl*, *sl*, *sn*, *sm*, *tw*.

"In our own first grade we require a knowledge of the first fifteen of the fifty phonograms, making the next five optional, and a knowledge of the first four of the initial

consonant combinations. A knowledge of the short vowel sounds and all single consonant sounds is also required. In order to pass to second-grade reading a child must be able to read at sight material containing new words made up of the required phonograms or capable of being sounded correctly by the use of consonant and short-vowel sounds.

"Our basic first-grade list is, therefore, the following: all short vowel sounds; all simple consonant sounds; rule for lengthening vowel before final *e*; the following phonograms and letter groups; *ee*, *ed* (ending — looked), *ing*, *er* (ending), *ea*, (eat) *an*, *ou* (our), *en*, *ay*, *oo* (good), *oo* (moon), *ar*, *ow* (cow), *ow* (show), *ill*, *st*, *th*, *sh*, *gr;* optional, *at*, *it*, *in*, *y* (cry), *ai*."[1]

The relative values of letter sounds and combinations have been investigated also by Osburn.[2] His investigation consists of a phonetic analysis of the first 2,500 words in the Thorndike word list.[3] He found that of these 2,500 most important words only 186 are non-phonetic; that is, " not spelled as they are pronounced or pronounced as they are spelled. Examples of such words are *have*, *once*, *sugar*, *sew*, etc. It is evident that these words must be taught one by one as sight words." The remaining 2,314 words can be unlocked by means of a knowledge of phonetics.

Time can, therefore, be saved by attacking the phonetic elements of these words. Much additional time can be saved and much better results attained if teachers " teach first that which is most important. In phonetics this would mean that the teacher should teach first those word elements which enter most frequently into the make-up of the words which the child must know in order to read

[1] Vogel, Jaycox, and Washburne, *op. cit.*, p. 440.

[2] Osburn, W. J. *The Relative Value of Letter Sounds and Consonants.* Mimeographed circular issued by the State Department of Public Instruction, Madison, Wisconsin. September, 1923.

[3] *The Teacher's Word Book.*

well. We now know quite definitely just which words are the most important. . . . The most economical thing to do is to teach most carefully those elements which occur most frequently."

TABLE XLII

Relative Value of Consonants and Consonant Combinations in the First 2,500 Words of the Thorndike List.[1]

Initial Consonants	Number of Syllables	Final Consonants	Number of Syllables
s	409	*–r*	375
t	385	*–n*	344
c	306	*–l*	211
p	230	*–s*	171
d	227	*–t*	146
f	216	*–d*	112
b	213	*–m*	104
r	200	*–p*	87
m	184	*–nt*	69
l	180	*–re*	66
w	137	*–ce*	64
g	130	*–se*	62
n	122	*–th*	62
h	113	*–nd*	60
v	81	*–st*	57
th	69	*–ve*	52
st	68	*–ng*	52
pr	54	*–te*	48
ch	42	*–ck*	45
		–c	43
		–ch	40
		–f	39
Total	3366	Total	2309
Grand total	3607	Grand total	2967

Tables XLII, XLIII, and XLIV show the relative frequency of the most important consonants, vowels, and pho-

[1] Osburn, *op. cit.*, p. 2.

nograms in the 2,314 phonetic words. Some of the phonograms are omitted because they unlock less than two per cent of the words; these omissions account for the differences between the totals and grand totals in the tables.

TABLE XLIII

Relative Value of Vowel Combinations in the First 2,500 Words of the Thorndike List[1]

Vowels	Number of Syllables	Vowels	Number of Syllables
Short *e*	465	Short *y*	121
Short *i*	455	*–or*	98
Short *a*	347	*–ar*	94
Long *a*	220	*ea* as in each	89
Short *o*	205	Long *u*	88
–er	203	*o* as in son	65
Long *i*	178	*ee* as in meet	64
Long *o*	163	*–le*	49
Long *e*	148	*ou* as in our	44
Short *u*	133		
		Total	3229
		Grand total	3722

"In recent years there has been a great deal of discussion concerning the relative value of teaching phonetics according to two different methods. In one the vowel is connected with the *preceding* consonant; in the other the vowel is connected with the consonant *following*. According to the first, the word *cat* would belong to the *ca-* family and be taught as *ca-t*. According to the second the same words would belong to the *at* family and be taught as *c-at*. The latter method has the advantage of most general use while the former has two advantages not possessed by the latter.

[1] Osburn, *op. cit.*, p. 2.

In the first place most English words are divided into syllables in such a manner as to connect each vowel with the *preceding* consonant. Thus we have *la-dy*, *ri-pen*, etc. The second advantage is more difficult to explain. It arises from the data presented in Table XLII. The 19 initial consonants in this table unlock 3366 of the 3607 syllables with initial consonants while the 22 final consonants unlock only 2309 out of 2967 syllables with final consonants. Thus the first method unlocks more syllables with the same amount of labor. Because of these two advantages the data in Table XLIV are presented in terms of the two initial letters only." [1]

TABLE XLIV

Relative Value of Initial Letter Combinations in the First 2,500 Words of the Thorndike List [1]

Phonograms	Number of Words	Phonograms	Number of Words
co	83	*ca*	31
st	60	*so*	30
pr	54	*ha*	29
re	53	*br*	28
de	45	*la*	28
th	43	*gr*	27
be	39	*sp*	27
se	39	*su*	27
ma	38	*wi*	27
fo	37	*bo*	26
pa	37	*to*	26
di	34	*tr*	26
ch	33	*ho*	25
fa	33	*mo*	25
in	33	*ro*	25
sh	33	*sa*	25
		Total	1126
		Grand total	2500

[1] Osburn, *op. cit.*, p. 3.

The investigations reported in this section show, first, that the reading vocabulary of children is largely phonetic and, second, that certain phonograms are of greater importance than others. The Washburne list shows the relative importance of certain letters and combinations of letters when the traditional phonetic system is pursued, and Osburn shows the same for the natural phonetic method. Until further investigations have been made as to the practicality of the two phonetic methods, their relative value cannot be definitely determined.

c. **The results of the teaching of phonetics.** " Phonics or No Phonics " is the suggestive title of a preliminary report made upon work conducted in Franklin, New Hampshire.[1] According to this report, an experiment was conducted in Grades I and II. In each grade two " classes of equal size and average ability were formed." One pair of classes had phonics; the other had none. The opinion of the teachers of these four classes was that the phonics classes sacrificed interest and meaning for formal elements. From time to time unfamiliar stories were read by the four classes and tests of reproduction of the content were administered. The phonics classes consistently fell behind the others. Not even in the attack upon new words did the phonics class excel. In special cases, however, phonics proved valuable:

"In special cases these observations were made, which have proved valuable: Foreign children, those having impediments of speech, and those who had previously formed bad habits of pronunciation were greatly benefited through the phonetic drills. Certain hesitant, expressionless, and habitually slow readers were greatly helped in overcoming

[1] Currier, L. B., and Duguid, O. C. Phonics or No Phonics. *Elementary School Journal*, XVII, 286–287. December, 1916.

these faults by the rapid work required in the quick-perception and sense-content methods."

During the year following the foregoing report, the same experiment was tried with two third-grade classes.[1] One class was given "thorough phonetic training and the other no such training." The results were as disappointing for the phonetics as in the first year. A modified form of this experiment was tried again in the ensuing year with Grades 3–A and 3–B. The children were divided into three groups according to their ability. The "bright group" was given "pronunciation games." The game consisted of attacking new words selected from the dictionary; the words were phonetically unrelated. "This work has always been eagerly received by the children, and through its use they have developed to a greater degree their 'natural phonic sense' besides gaining a nicety of diction, an increased vocabulary, and greater mastery of and confidence in attacking unfamiliar words in both sight and silent reading." The second group which was made up of "careless, heedless, indolent readers," was given intensive training in phonics. The "pronunciation games" were also used with this group. Besides, regular reading periods were abandoned for some weeks and the story hour substituted. Later, children were allowed to borrow the books containing the stories; after that silent reading became very popular and reading periods were resumed. "By using phonics as a remedy and keeping a growing desire for stories themselves as an aim, the problem had been solved." The members of the third group were retarded as to school grades although they were not known to be mentally slow — many had recently arrived from for-

[1] Currier, L. B. Phonics and No Phonics. *Elementary School Journal*, XXIII, 448–452. February, 1923.

eign countries, while others had moved about from school to school too often for their pedagogical health. "It was decided to try out the theory of 'learning to read by reading,' but where was to be found material which would make the slightest appeal to these children? Anything simple enough to be read by this group would possess no interest for them but would lead to great discouragement and ultimately destroy all possibility of progress. The only solution seemed to be to adapt to their needs the stories which had proved to be favorites with the other classes. These simplified stories were written on the blackboard and developed by story-telling and sense-content methods. After the interest of these pupils was awakened and they had begun to gain self-confidence, phonic and word drills were used, and their progress was much more encouraging. In June these people could read third-grade books with thorough appreciation and enjoyment. Faults of pronunciation still existed, but the children were no longer discouraged or submerged, and they looked forward to each new story and new book."

A group of thirty-five fourth-grade pupils of unusual ability was "closely observed. They were correct, rapid, expressive readers and were found to have highly developed phonic sense. In spelling and written dictation they were correct and rapid. Because of their reading proficiency they were able to do a great amount of geography, history, and other silent reading. In music they were rapid and correct sight readers. On tracing their previous school records it was found that from the very first they had possessed a very acute phonic sense. The usual training in phonics had seemed a waste of time and had very soon been practically abandoned. In addition, it was shown that the personnel of the class was little changed from the registration in the first grade."

As a result of five years' experimentation, the following conclusions have been formed:

"Phonetics drills have a very real value but are not essential to every child as a part of the daily program in primary grades.

Phonetic drills should at all times be employed with discretion and adapted to the needs of the individual child or special group.

Word-pronunciation drills have proved to be of much value. They may be only a very good device.

Much careless oral reading and failure to get the idea from the printed page come from poorly or carelessly supervised silent reading.

The thing of greatest importance is to arouse, hold, strengthen, and develop the interest of pupils. Choose silent-reading material with utmost care, bearing in mind the varied tastes of the pupils.

Do not use one system for every case. What is food for one may be poison for another. Cull the truth from many systems. Study the needs of the different pupils and then experiment to find the best method for the particular problem encountered."

Another study of phonics or no phonics was reported by Waldo in 1915.[1] Waldo gave an account of the relative abilities of pupils in Grades III to VIII. Some of these pupils had been in classes where drill on phonetics was conducted and some had not. Grades III and IV were tested by having them read in September a passage from Eggleston's *Stories of Great Americans for Little Americans*.[2] In March another passage was read from the same book. In both tests, the pupils were directed to read carefully until told to stop and then to mark the place reached and

[1] Waldo, K. D. Tests in Reading in Sycamore (Illinois) Schools. *Elementary School Journal*, XV, 251–268. January, 1915.

[2] American Book Company, 1895.

write an account of what they had read. For Grades V–VII a similar method was followed with two passages from the school weekly paper, *Current Events*.

"All the children below the sixth grade started with the Ward system of reading, except about one-half of Miss Middleton's third-grade room, which had the Howe system. One reason for putting the rather difficult reading material offered in the *Current Events* down so low in the grades was for the purpose of comparing the fifth and sixth grades upon the same reading material; the former learned to read by a severe phonic system (the Ward), while the latter was taught to read by whatever plan the teacher chose to develop. The figures for these two grades show a relation quite similar to the relations of the other similar grades; so that it is impossible to draw any conclusion regarding the relative merits of the two different plans for starting the reading work. In other words, there seems to be no more difference between a fifth grade which has had the Ward method and a sixth that has not than there is between the sixth grade and the seventh, neither of which has had the phonic system.

"It will be seen that the third-grade children who learned to read by the Howe method did the best reading work in the fall test, 39.338 being its single-index measurement, compared with 29.40 and 34.07 for the other third-grade rooms; while in the spring test it had lost its leading position, scoring 52.05, which put it into third place, for the other figures totaled 75.174 and 63.969. This cannot be attributed to the Howe method entirely, for the teacher in that third grade, although she tried to work both systems, did not carry on the drills as thoroughly as she might, being more interested in the Ward method. Here was clearly shown the loss occurring in a single system when different plans of work are carried out in the same grade. Miss Middleton, the teacher, explained this weakness of her grade by the fact that she had a fourth grade in the

room at the same time which was twice as large as her third and somewhat backward. In trying to bring this fourth grade up to standard, she thinks that she might have neglected the third grade somewhat."

It is unfortunate that standard tests of initial and final abilities and intelligence quotients were unavailable in making the measurements and comparisons in these reports. Two additional investigations of the relative merits of different methods are reported by Gray:[1]

"Gray reports the results of a study to determine whether the Aldine system or the Ward system secured the more effective results in the mechanics of oral reading. Of the 44 schools tested, 26 schools used the Aldine method, 17 schools used the Ward method, and one school used its own method. The results showed that differences in method were not accompanied by uniform differences in accomplishment. The average score for each of the two groups was approximately the same. A study of the records of individual schools showed that of the schools which ranked highest in the primary grades, some had been taught by the Ward method and some by the Aldine method. Of the schools which ranked lowest, some had followed the Ward method and some the Aldine method. The study verified the opinion which is current that there are factors other than the specific reading method employed, such as the teacher, the economic level of the pupils, the nationality of the pupils, the amount of supplementary reading material covered, etc., which must be considered in determining the causes of success or failure in primary reading.

"Harris and Anderson carried on an investigation in the Dubuque schools to determine the efficiency of the Beacon, Horace Mann, and Aldine systems of primary reading. The results of both the oral- and silent-reading tests indi-

[1] Gray, W. S. Principles of Method in Teaching Reading, as Derived from Scientific Investigation. *National Society for the Study of Education, Eighteenth Yearbook,* Part II, 26–51. 1919.

cated superior accomplishment on the part of pupils who had been taught reading by the Beacon system. The investigation was too limited in scope to justify final conclusions. Similar studies should be made in a larger number of schools with school populations which differ widely and with a larger number of teachers to determine whether

TABLE XLV

Median Class Scores for Test I of the Haggerty Reading Test, Classified According to the Phonic System Used[1]

	Aldine	Beacon	Elson	Gordon	Laurel	Natural	Progressive	Winston	Combination	Outlined by Supervisor
Grade I	3.4	6.0	2.3	6.8†*	0.8	6.3	6.1	8.3	5.3	10.5
	9.0	6.5	4.3	7.5	1.5	8.5			6.5	12.0
		8.0	4.5	8.9	4.8	9.2			10.5	13.2
		10.3	4.8		5.0*	9.3			11.7	
			6.0		5.0	9.5				
			6.5		5.4	9.8				
			16.3		7.0	10.0				
						10.1				
						13.8				
Grade II	10.8	—	11.8	—	8.0	11.5	12.5	9.0	9.5	12.0**
	12.3		12.3		9.5	13.0			17.0	12.8
	16.5		13.0		11.3	15.2				
	17.0		13.3		11.3	15.5				
	18.3		15.8		14.4	15.8				
			17.5*		16.0*	17.2				
						18.8				

*Two pupils skipped to 2d Grade in half a year.
†*Class did not have kindergarten training.
**Class had 4 different teachers during 1st semester of Grade II.

[1] Theisen, *op. cit.*, p. 13.

or not the results are a measure of the superiority of a given system or of some other factor, such as the special ability of an individual teacher."

In attempting to find out which phonetic system is most effective in teaching primary reading, Theisen in 1920 gave the Haggerty reading tests to the pupils in fifteen different school systems.[1] The results of the tests are shown in Table XLV. "The records of those individuals who had been present less than 130 days, who were transferred from other schools, or who had not had the advantage of kindergarten training were excluded. Although reports were received from 41 first-grade and 29 second-grade classes, the numbers were insufficient to warrant final conclusions. Not all of the good, nor all of the poor records were confined to classes trained in any one of the phonic systems.

"The system which produced the best class record in the first grade produced another that was among the poorest three. Two of the four best records were made by classes not reared by any of the commercialized systems, but on adaptations arranged by the teacher or the supervisor in charge."

Gray's conclusions are significant and can serve as conclusions to this discussion: "Superintendents and teachers will find it necessary to examine reading systems carefully and to estimate their value in the light of general principles. The following are suggested: An effective method (*a*) should place emphasis on the content of what is read by means of selections which are of real interest and significance and by means of the methods which are employed, (*b*) should develop independence in the recognition of words by means of word study and phonetic analysis introduced

[1] Theisen, W. W. Factors Affecting Results in Primary Reading. *National Society for the Study of Education, Twentieth Yearbook*, Part II, 1–24. 1921.

in special drill periods after the pupil has acquired a basic vocabulary through content reading, and (*c*) should provide a system of phonics which leads to a natural and accurate pronunciation of words when the sounds of the successive elements of words are combined and which will aid, rather than interfere with the analysis of longer words when they are encountered in grades above the second." [1] None of the experiments just summarized were so organized as to take advantage of the recent vocabulary studies.

Teaching beginners to read. Three different types of activity are emphasized in modern methods of teaching beginners to read: first, phonetic drills; second, specific reading lessons from books or charts; and, third, reading based upon the current daily activities. The employment of all three of these types of reading is characterized by variety of treatment, physical activity, and coöperative work and play.

Types one and three have already been discussed.[2] Type two, specific reading lessons, as well as each of the other types, has recently been reviewed and analyzed by Parker.[3] Parker describes a fourth day's work in reading. The teacher, Miss Hardy, skillfully centered the attention of the class upon a favorite nursery rhyme;

Jack be nimble,
Jack be quick,
Jack jump over
The candlestick.

Then a candlestick which had been provided for the oc-

[1] Gray, *op. cit.*, pp. 36–37.

[2] See pp. 39–40 for a discussion of the work of Watkins and Courtis.

[3] Parker, S. C. How to Teach Beginning Reading. *Elementary School Journal*, XXII, 15–30; 104–117; 175–188; and 255–268. September to December, 1921. Also published separately.

casion was brought out for use in a jumping game. After this game had progressed for some time, the teacher told her pupils that she knew how all could play the game at once. She then showed them how to represent a candlestick on the blackboard with Jack jumping back and forth over it. Next, Miss Hardy suggested that it would be fun to have the rhyme also on the blackboard. She then " took dictation " from a pupil who volunteered, " Jack be nimble." The other lines were added as the children dictated them.

Since the present chapter is not a manual of devices, but a discussion of the relation between classroom teaching and the organization of content, further examples of such lessons are unnecessary. The main points of teaching and organizing primary materials are both illustrated in this lesson. Parker describes in some detail the reading of each of several successive days. The reading of " Jack be nimble," the " come to class " lesson of Miss Watkins, or the lessons devised by Heller and Courtis [1] as well as the successful phonetic work also described by Parker all proceed upon the same general level. The same general principles underlie all these forms of lessons. Parker summarizes these principles under four points:[2] "(1) Pre-primer reading should initiate the correct reading attitude of trying to get meaningful and interesting experiences from printed or written material. (2) To cultivate this attitude, content such as action words and nursery rhymes should be selected which entices the pupils to focus their attention upon the meanings. (3) The attitude of *desiring to read* is also initiated by the intense interest which children attach to nursery rhymes and stories. (4) In beginning the reading of any selection, the whole thought or experience should receive first attention; then the material may be

[1] See pp. 240–242.

[2] Parker, *op. cit.*, p. 109.

subdivided into lines, phrases, and individual words for reading practice. These points describe the method of approaching reading that is securing more and more general adoption in progressive elementary schools." In order to cover the case of phonetics, a fifth point is added: phonetic drills should be developed from the reading experiences of pupils so as to enable them to read with accuracy and independence.

Oral and silent reading: in the primary grades. The results of recent investigations have convinced progressive teachers that silent reading should receive the leading emphasis from Grades III upward, and that oral reading should receive less and less emphasis from Grade I upward. Although this is generally accepted, most series of readers were published when oral reading was given the leading emphasis throughout the elementary schools. If, as certain authorities imply,[1] oral reading and silent reading each require different kinds of material, it will be necessary to reorganize the content of reading courses so as to provide suitable material for silent reading.

One of the most fruitful methods of determining the character and organization of reading materials is that of examining the methods employed by outstanding teachers of reading. Although this method may not establish the final type or types of content, it will serve as a temporary basis for judging content. Investigations in which there is careful standardization of materials and use of different methods by the same teachers may, at some future time, alter the situation. Until such investigations are made we must either spin theories or accept the best practices of superior teachers; the latter policy is now the better.

Inasmuch as reading has been investigated with great

[1] See pp. 40–42.

care at the University of Chicago, methods employed in the elementary school of the institution will first be examined. Those methods are described in detail in Parker's series of articles, to which reference was made in the preceding discussion of phonetic training.

As already stated, the pre-primer work was conducted in part with nursery rhymes and in part with current incidental accounts of the daily school activities. The first lesson from a primer was conducted after the children's interest in reading had been aroused. While they were waiting eagerly to receive their books, the children were told that the book, like those previously read in the class, had a name and that it contained stories and pictures for them. Then Miss Hardy, the teacher, gave each child a book and asked all to look quickly to see if the book contained any familiar story. "One boy wanted to know if a certain story was in the book. The teacher told him to look at the table of contents, then asked all the children to look. Some of the children began to count the titles of the stories in the table of contents. About five minutes were consumed in permitting the children such random, spontaneous activity with the book.

"**Manila line-marker to each child; table of contents read.** — Miss Hardy then brought the group to attention by saying, 'Look up here, everyone. I am going to give you each a marker,' showing a strip of durable manila paper about 4 inches long and 1 inch wide. 'Place it under the name of the first story, and then move it down as I read each name. . . . The first line says what?' The children gave this title as they had learned it on the chart. 'And what page?' The children answered correctly. The teacher then read each succeeding line, meanwhile watching the group closely and assisting slow pupils to move their markers to the appropriate lines.

"Reading of the First Story

"Story first told by children from its successive pictures. — 'Now all turn to the first story,' said the teacher. The children quickly recognized it as the one from the last chart. 'Let's all look at the pictures together to see if it is the same story we know. . . . What is happening in the first picture? . . . What do you see in the second picture?' and so on until all the pictures had been examined and the story of each told by the children.

"Rapid reading. Markers moved carefully; line scanned silently; hands raised; chosen pupil read line orally. — 'Now turn back to the first page,' directed Miss Hardy, 'and we shall read the story. . . . Put your markers under the title. Always keep your markers very still. Read the title. . . . Gideon. . . . Now put your markers under the first line and get ready to tell what it says. Read silently. . . . John, read it to us. . . . Now the next line. Move your markers, study it; read silently. Then raise your hand to tell me what it says.' As the children proceeded there were exclamations of 'I know,' etc., and giggles of delight at recognizing the familiar lines. Occasionally the class read a difficult line in unison. Several pages were easily read in a few minutes, Miss Hardy showing the children how the story continued from the bottom of a left-hand page to the top of a right-hand page, etc." [1]

A second-grade class conducted in the same school by Miss Lucas is also described by Parker. A portion of a lesson about India illustrates several features of the method used in presenting the story. Among the "questions and remarks, which were interspersed with answers from the children, were the following: 'How many of you, when you went to the zoo, saw the crocodiles?' 'How do they

[1] Parker, *op. cit.*, pp. 115–116.

move, quickly or slowly?' 'Do they climb trees like monkeys?' (Some of the children said they do.) 'What kind of country do they live in, cold or hot?' 'Where do monkeys live; in what kind of country?' 'If a crocodile wanted to catch a monkey, how would he do it?' 'I thought this morning you would like to read a story about how a crocodile tried to catch a monkey.' 'The animals we are going to read about lived in a country called India,' said the teacher as she wrote the word *India* on the board. She then wrote *Mr. Crocodile* and *Mr. Monkey*, saying, 'They called each other by these names.'

"**Silent reading. Books presented to pupils.** — 'When I give you your books, turn to page 85, read silently, and tell me if there are any words you do not know.'

"**Much whispered vocalization indicated stage of development.** The children followed these directions and read the story silently with perfect attention. There was much whispered vocalization, showing that most of the children were not reading to themselves any faster than they could pronounce the words.

"**Assistance in phonetic analysis of new words given individually.** — The children that needed assistance advanced individually to the teacher who was now seated in a low chair. As each child pointed out the words he did not know, Miss Lucas gave him help in such a low tone that the others were not distracted. As a rule she did not tell a child outright, but helped him use his phonetic ability. For example, she said, 'You have two vowels here, Clarence; which one do you pronounce?'

"**Oral reading. Rapid, connected, fluent audience reading, aided by teacher's suggestions.** — Since there were several visitors present, Miss Lucas then had the children read the story orally in a rapid, continuous manner. She gave occasional suggestions such as the following:

"'I'll ask Esther to start reading. . . .' 'Remember, now you are speaking to him, Esther.' 'What did he an-

swer, Frank?' 'Then, how did the crocodile find the monkey?' 'What did the crocodile say, Robert?' 'Not quite so fast, Emerson, so we can hear every word.' 'Now, Constance, these people are talking back and forth. Read just like you were talking, just like you would say it if you were the monkey.'

"**Plan to represent characters of story and improve reading.** At the end of the reading there was a discussion arising out of the teacher's suggestion that next time they read the story again with different children taking the parts of the characters in the story. Miss Lucas asked, 'How might we make our reading better?' The pupils gave various answers such as 'Get our words together,' 'Read like people talk,' and 'Know the place.'" [1]

These examples illustrate the employment of both oral and silent reading in the reading of both factual and fanciful materials.

Heller and Courtis report some reading exercises developed at Detroit.[2] These exercises were planned to "serve in a direct and easily recognized way to modify or guide the child's behavior." Early in the first year such selections as the following were written on the blackboard. The children were asked to read them silently, and then draw a picture or make a cutting to illustrate what they had read.

Up in the tree
A little bird sings,
Under the tree
A little girl swings.

The Easter Bunny is sitting in the grass.
He has a new spring coat as white as snow.
He has beautiful pink eyes.
He is carrying a basket of Easter eggs for the children.

In the second year similar exercises were used. For example, the children read the nursery rime,

[1] Parker, *op. cit.*, pp. 185–188. [2] See footnote on p. 234.

There was an old woman who lived in a shoe,
She had so many children she didn't know what to do.

Afterward they read directions for illustrating the rime. The directions were as follows:

Cut out a large shoe.
Put a little window in the shoe.
Color the shoe black.
Cut out six children.
Make two of the children peeking over the top of the shoe.
Make three children peeking out of the window.
Make one peeking over the toe.

Altogether eight different types of such exercises are cited:

1. Directions for illustrating nursery rimes
   a. The Old Woman and Her Shoe
   b. Little Miss Muffett
   c. Hickory, Dickory, Dock
2. Directions for illustrating stories
   a. The North Wind at Play
   b. The Three Little Pigs
3. Directions for constructing toys
   a. How to Make A–B–C Blocks
   b. How to Make a Red Riding Hood Doll
4. Directions for illustrating
   a. Wash Day
   b. Gardening Tools
   c. Objects for an Indian Sand Table; an Indian Wigwam; an Indian Brave
5. Directions for drawing, picking out a portion of the text, and writing it in a specified place.
   a. The Three Little Kittens
   b. The Bluebird
6. Type demanding the reading of a short description to carry out the directions.
   a. The Goldfinch

7. Type based upon geography for fourth-grade children and necessitating accurate placing of the drawing.

8. Illustrating the compositions of other children.

As discussed by Heller and Courtis, the material was used for silent reading only. It will be noted that both factual and fanciful materials as well as prose and rime were used.

In the *Twentieth Yearbook*, Part II, there are also descriptions of several additional types of silent reading lessons.[1] Three flash card lessons reported by Helen R. Gumlick of Denver are based upon the flag, local directions, and table etiquette. In the lesson based upon the flag, questions are flashed for the pupils to answer. "Whose flag is this? For what country does it stand?" and so forth. The lesson based on local directions consists of "Point to the North, Point to the South," and so forth. The lesson on table etiquette consists of incomplete sentences, as "The plate belongs ——" (directly in front of you); "the napkin belongs ——," and so forth. Miss Grace Shields reports from Cedar Rapids, Iowa, upon lessons based on projects. After a project on candle-making had been discussed and carried out in Grade II, questions on the project were used by means of flash cards. The questions tested and gave training in comprehension, organization, and reproduction. Lessons reported by Martha Farnham of Racine, Wisconsin, illustrate kindergarten and pre-primer work. Those lessons are based on children's experiences with nature. For example, with the special subject "Birds in the Spring," such topics as "What Do Birds Do in the World?" were used for problem-lessons. Silent reading lessons based on regular school activities have already been described on p. 39.

[1] Silent Reading Exercises Developed at Denver, Cedar Rapids, Racine, and Iowa City.

Oral and silent reading: the later grades. A thorough canvass of the methods of teaching silent reading in Grades III to VIII enabled Rhodes to formulate the following points relative to the technique of teaching silent reading.[1] These points were collected from school survey reports, circulars of city school supervisors, and various periodicals. This formulation of points is the most complete that has yet appeared in periodical literature. Owing to its completeness, it is valuable in enabling teachers and supervisors to select and organize appropriate instructional materials for silent reading.

"I. To train pupils to judge relative values.

1. Reading to find favorite verse.
2. Selecting the most beautiful descriptive scenes, the best character sketches, well-chosen and apt words and phrases, humorous passages, etc.
3. Reading to weigh the relative importance of a selection.
4. Reading the most interesting part of the story and then giving a brief synopsis of the events preceding and following the chosen incident.
5. Reading material rapidly; skimming to get a general impression of its contents in order to determine whether or not it will serve one's purpose.
6. Noting sections of material that should be read more carefully.
7. Judging the worth of material for a specific object by consulting the index and table of contents of a book.
8. When differences of opinion arise, reading to justify one's opinion; contributing to class discussion; reading aloud passages to prove points.

[1] Rhodes, E. N. Technique of Teaching Silent Reading. *Elementary School Journal*, XXIII, 296–302. December, 1922.

9. Reading the selection as a whole; determining relative value of different parts; determining relation of parts to each other and to the whole. Illustration for story reproduction: What parts must be remembered to be able to tell the story? Re-reading and observing what parts may be forgotten without destroying the story. Analyzing the selection into scenes or situations.

"II. To train pupils to find the organization of the thought of a selection and thus to discover by example how to organize their own thoughts.

1. Reading for the essential thought or essential points of the selection.
2. Making outlines of chapters.
3. Making paragraph headings; determining author's purpose.
4. Endeavoring to see whether chapters are well named and to make better headings; challenging headings.
5. Formulating questions to cover the main points.
6. Making individual reports to the class on current events.
7. Assigning special library problems.
8. Training in analyzing narrative units of different lengths.
9. When children are familiar with a subject, letting them name the items that should be included under a given heading; reading paragraphs under such a heading to discover the presence of relevant points.
10. Dividing long stories into short stories, giving each a subtitle.
11. Reading the most interesting part of the story and then giving a brief synopsis of the events preceding and following the chosen incident.
12. Gathering sentence elements into thought units and discovering their relation to each other.

Out of such practice should grow the ability and habit of skimming a page quickly and at the same time grasping the most important elements of the page. Such a habit should tend to develop speed in silent reading; in oral reading, to train the eye to run ahead of the voice and phrase words into appropriate thought groups.

13. Developing a better technique of study. Johnson[1] makes the following suggestions in regard to studying and learning a lesson in history:

(*a*) Notice the heading of the paragraph.
(*b*) Read the paragraph.
(*c*) Does the heading really tell what the paragraph is about?
(*d*) Read paragraph again and find all of the different points that are mentioned. State in three or four words each of these matters and write them in your notebooks.
(*e*) How many of them would you expect to find mentioned under this heading?
(*f*) Point out all the matters that you would not expect to find mentioned under this heading.
(*g*) Put them together and think of the kind of heading under which you would expect to find them all mentioned.
(*h*) What is the subject of the chapter?
(*i*) What things in the paragraph are directly connected with this subject?
(*j*) What have the other matters to do with this subject?
(*k*) Are they necessary to give an idea of this subject?

[1] Johnson, Henry. *Teaching of History*, pp. 308–309. The Macmillan Company, 1915.

(*l*) What points are necessary?
(*m*) What points, then, are most important for this subject? least important?

"From the outline thus made the pupil sums up the paragraph in his own words; then, laying aside the outline, he sums up the paragraph again. Finally, the whole lesson is summed up in this manner. Emphasis is thus laid, not on the outline itself, but on the use to which it is put. The test of value is the connected account which the pupil is able to give.

"These suggestions on how to study and learn a lesson in history constitute to a degree the technique of reading, and this technique should be developed in the reading class so thoroughly that it will carry over into the study of history, geography, and other content studies.

"III. Comprehension.

1. Reading to find suitable story or selection to read to others.
2. Reading either individually or by groups so as to make oral or written reports to others.
3. Reading so as to draw the picture described.
4. Reading rapidly in order to answer specific questions.
5. Reading silently directions for a game, an errand, a problem, a drawing, or construction work, and then proceeding to carry them out.
6. Reading under the direction of the teacher to associate the facts of a selection with the things already known.
7. Reading a selection for purposes of dramatization.
8. Organizing competitive reading clubs.
9. Using at frequent intervals informal tests of comprehension.
10. Improving ability to concentrate under pressure of time control.

11. Flashing questions for answers.
12. Reading for meaning rather than for word analysis and pronunciation.
13. Organizing games for drill purposes: using action cards, language-response cards, one-word response cards, or paragraph cards with specific questions on the back.
14. Studying words, prefixes, suffixes, stems, and homonyms.
15. Reading a paragraph to discover all of the different items mentioned.
16. Recognizing while reading that the material is to be used for some purpose. Expecting pupils to reproduce a selection concisely after the first reading.
17. In developing literary appreciation the power of visualization or picture-forming is most important. Selecting passages vivid in description to develop this power in pupils.
18. Placing special stress on training which is designed to secure marked improvement in accuracy of comprehension.

"IV. Rate of reading.

1. Flashing words, phrases, or sentences; using as flash cards lines cut from old primers.
2. Organizing games; matching phrases and sentences; motivating rate in reading by the use of games.
3. Limiting the amount of time given to the readings; timing paragraph reading; frequently employing the pressure of time control; making speed a definite objective.
4. Having the teacher read a selected sentence at random and then allowing the child who first finds the place to continue.

5. Encouraging the pupil to improve his own achievement by keeping individual speed records, charts, and diagrams.
6. Training pupils to think in sentence meanings rather than in word meanings.
7. Drilling on phrases and short sentences in order to increase the span of recognition.
8. Giving phonetic drill for the recognition of unfamiliar words.
9. Training the child consciously to avoid vocalization, pointing with fingers, etc.
10. Using informal tests for speed at frequent intervals.
11. Encouraging pupils to read three or four words at a glance; drilling on proper word-grouping to reduce number of fixations.
12. Establishing regular, uniform, rhythmical eye-movements.
13. Re-reading for increasing rate; checking for comprehension.
14. Skimming, with check for comprehension.
15. Using care in selecting material so as to arouse interest and enthusiasm.
16. Discovering the individual desires and interests and using them to improve the reading.

"V. Provision for practice in silent reading.

1. Directing children's attention to interesting reading.
2. Arousing a desire to read by telling part of a story.
3. Encouraging the bringing in of outside reading material.
4. Giving children the opportunity to reproduce the stories read.
5. Providing lists of available and suitable library books.

6. Providing a book table in the room.
7. Encouraging the reading of supplementary material in order to solve some class problem.
8. Encouraging pupils to read for pleasure.
9. Providing children with the opportunity, under the guidance of a teacher, to browse among books in order to satisfy individual tastes; keeping a written list of books read.
10. Rotating library books."

The comprehensive and representative character of this formulation of points is evident. The validity of the formulation is not evident. In order to test its validity, it will be judged with reference to the objectives and social values set up in Chapters VII and VIII. The process of judging the validity will consist of asking the following questions which are based upon valid objectives and social values. If these questions can be answered affirmatively, the formulation must stand.

Does the formulation make adequate provision for:
(1) training in the mechanics of reading?
(2) training in the comprehension and interpretation of what is read?
(3) training in general culture?
(4) training for later school reading?
(5) training for the general reading of adults?
(6) training for vocational reading?
(7) training in obtaining information from varied readings?
(8) training in reading with discrimination?

In answering these questions, only the main headings of the formulations will be repeated, because the reader can examine the formulations for further details. First, the mechanics of reading is provided for specifically under IV, the rate of reading, and in general under each of the other

four main headings. This provision is adequate because motivated exercises, formal and informal, in word, phrase, sentence, and paragraph attack are included. Second, training in comprehension and interpretation is provided specifically under III, comprehension, and in general under I, training in relative values, and II, training in organization of thought. Third, training in general culture is provided specifically under I, training in relative values, and V, training in general silent reading. Fourth, training for later school reading is provided under all the main headings; for example, training in arithmetical reading is provided under I, 6, noting sections of material that should be read over carefully, under III, 5, directions for problems, and under III, 15, and 18, which emphasize careful reading for meaning. Likewise training is provided for other subjects, as history and geography reading under II, 13, developing a better technique of study. Fifth, training for the general reading of adults is given specific attention under V, provision for practice in silent reading, and general attention under each of the other headings. This provision is adequate because no type of important or desirable material need be omitted in arranging for the types of technique listed. Sixth, training for vocational reading is provided as already stated under earlier points. Seventh, training in obtaining information from varied readings is specifically provided under II, on organization, III, on comprehension, and V, on practice in the silent reading of varied materials. Eighth, training for reading with discrimination is provided specifically under I, on the judging of relative values, and V, training in satisfying individual needs by silent reading.

The outcome of our analysis is unequivocal. This list of ways for training in the technique of silent reading is valid and adequate, according to the objectives and social

values of the present day. This point being settled, the main purpose of the examination can next be settled. As stated in introducing this formulation, the kinds of training required for developing techniques determine the character of instructional materials to be employed. This being true, it is perfectly clear that all forms of important reading material not only *may* but *must* be included in silent reading lessons.

The present discussion does not answer the question raised in Chapter III, as to whether silent and oral reading can be taught by the use of the same materials. Instead, it merely shows that, in providing adequate training in silent reading, all desirable forms of reading material are appropriate. How much space each form of material will occupy in a series of readers or in a course of study cannot be determined with exactness at present. Indeed, this cannot be determined until two points are decided: first, what is meant by adequate ability in reading different kinds of material, and second, how much of each kind of material is required for practice. Neither of these points can be settled by argument; they can be settled only by practice and measurement of results. The present duty of compilers of materials is, therefore, that of attempting to provide an adequate supply of varied materials; the duty of teachers consists of using the varied materials in such ways as Rhodes has outlined. This statement is equally true for both silent and oral reading except that training in oral reading must be in such ways as Rhodes outlines under IV and Parker describes in the passages quoted earlier in this chapter.

An example of silent-reading lessons for the junior high school is drawn from a report written by Miss Shepherd.[1]

[1] Shepherd, E. Some Silent-Reading Lessons in Junior High School English. *School Review*, XXIX, 206–215. March, 1921.

This report shows the results of suggestions made by Lyman on "assimilative reading."[1] Miss Shepherd employed three types of reading matter: (1) textbook reading on such topics as *How the American School Developed* and *The Money Value of an Education;* (2) supplementary reading of such material as that contained in the *Community Life Series;* and (3) recreational reading of such stories as *Tom Brown's School Days, The Hoosier Schoolmaster, Nicholas Nickleby*, and Piper's *The Boy on the Prairie.*

In preparing her pupils for this reading, Miss Shepherd aroused their curiosity about their rates of reading. She next succeeded in getting them to formulate advantageous ways of practicing reading. Her conclusion was that much specific practice is needed on each form of technique, and that variety of methods and materials is required — both silent and oral reading with prose and poetry were employed by her.

Specific teaching of neglected reading material. A form of reading which has received a great deal of attention and constructive thought is the ability to read problems in mathematics. In order to impress more fully upon adults the difficulties encountered by children in their reading of mathematics, Thorndike and Upton induced a group of students to act as subjects in an investigation of abstract learning.[2] The investigation consisted of having the subjects read a passage from an electrical engineering textbook, and then apply the information gained to a list of problems contained in the same book. The results showed very clearly that the adults proceeded just as children do

[1] Lyman, R. L. The Teaching of Assimilative Reading in the Junior High School. *School Review*, XXVIII, 600–610. October, 1920.

[2] Thorndike, E. L., and Upton, C. B. An Experiment in Learning an Abstract Subject. *Journal of Educational Psychology*, XIII, 321–329. September, 1922.

in such cases. Both adults and children "fish about" for possible clews to solutions and often take any which promises escape from the pain of perplexity. The answers given by the high-grade adults to one of the problems in electrical engineering show the results of adults' reading and reasoning (all the answers are wrong):

15,503 lines	174,000 cos 63
15.5035	4.739 gauss
93,020 lines	78,994 dynes
348,000 cos 63	7.8996

Thorndike and Upton suggest that a probable reason for the difficulty which adults encounter in the reading of short passages and applying the information gained is that mathematics reading is peculiar — instead of being merely "harder," it is different. The difference lies in the fact that mathematics requires more "reading between the lines." In order, therefore, to facilitate such reading, the "supplying of necessary interpretations and connections, is desirable in moderation."

A specific example of providing interpretations and connections is found in the work of Miss Wilson.[1] Teachers under Miss Wilson's supervision "were advised to have pupils study the problems just as they would any lesson — that is, with the idea of getting the thought of the reading regardless of the figures. To this end, the teacher placed on the board questions that would aid the pupils in determining the meaning of the problems, just as she wrote questions that would aid them in interpreting a story from the reader. Sometimes the pupils themselves suggested questions with the same intent. An example of a problem with appropriate questions will illustrate the method.

[1] Wilson, Estaline. Improving the Ability to Read Arithmetic Problems. *Elementary School Journal*, XXII, 380–386. January, 1922.

"James sold 36 copies of the *Saturday Evening Post* at 5 cents each. He kept $\frac{2}{3}$ of the money. With the remainder he bought daily papers at $\frac{3}{4}$ cents each. How many did he buy?

1. How could you find out how much James would have after he sold his copies of the *Post?*
2. What part of his money did he spend for daily papers?
3. What part did he keep? What did he probably do with his money?
4. Why do you think he did not spend it all for more papers?
5. How did the cost of a daily paper compare with the cost of a *Post?*
6. If you know how much money he spent for daily papers and the cost of each one, how will you find how many he could buy?

"Again, the pupils used the mere facts of the problem as a plot of a story. They read between the lines and supplied the details which made the problem real. They changed dull facts about buying and selling sugar into fanciful tales of lemonade stands.

"Such a problem as 'What was the cost of 6 pounds of sugar at 8 cents a pound, 6 cans of milk at 5 cents a can, and 2 dozen eggs at 30 cents a dozen?' becomes for Louise a shopping situation in which her mother wants to bake a cake — unexpected guests — Louise must make a hurried expedition to the corner grocery. Her mother needs three things — eggs, milk, and sugar. She says them over and over on the way so as not to forget the important items. The grocer quotes prices as she buys each article. 'Eggs are 30 cents today; sugar is down to 8 cents a pound,' etc. She gets home and reports to her mother the total expenditure, and her mother, in turn, counts up to see if Louise has figured the problem correctly."

The results of such training in reading justify such attacks upon problems in arithmetic. The point here is,

however, the difficulty of developing the ability to attack arithmetical problems is in part a reading difficulty. Either in the course in reading or in the mathematics class, the difficulty should be met by specific training. If such training is given in the reading course, clearly there must be more ample provision for such drill than is commonly provided by school readers.

An adequate course contains varied materials. So far this chapter has presented a number of examples of the work of progressive teachers and supervisors of reading. The present interest in these examples is this: Do the practices of progressive teachers and supervisors indicate what the character of reading material should be? The answer to this question is plain. The practices of progressive teachers and supervisors indicate clearly that a good course in reading consists of varied materials, prose and poetry, both factual and fanciful material, and academic, vocational and recreational material.

The next step, therefore, is to find varied materials of suitable difficulty and of sufficient interest and social worth to justify their use. In order to select wisely from the great mass of material now extant, a technique of selection is necessary. The elements of that technique are to be derived from investigations of children's interests, discussions of classroom teaching, and plans already in use for selecting and organizing materials. Children's interests and classroom teaching have already been discussed; plans now in use for selecting and organizing materials will be discussed next.

Miss James has described the method of selecting and organizing materials now employed in the State Normal School of Salem, Massachusetts.[1] The materials include

[1] James, M. E. Use of Classroom Libraries to Stimulate Interest and Speed in Reading. *Elementary School Journal*, XXIII, 601–608. April, 1923. This article contains titles of books for Grades II and III.

picture books, rimes, nonsense books, various readers, magazines, and books on such subjects as geography, history, hygiene, and nature study. The lists now in use " are far from complete, and there is no claim that the books are all equally interesting to all children of these grades. There is such variety, however, that every child may be provided with some supplementary reading suited to his interests and capacity. The books listed have actually been read and enjoyed by children of these grades and have not been selected from the adult point of view as being suitable and desirable. Neither are they selected from the point of view of literature in the general understanding of the term, that is, literary classics. The chief considerations in making the selections were as follows: (1) Is the book well written in regard to English? (2) Is it written in an interesting manner; that is, will it attract a child's attention and hold his interest? (3) Is it suited to the age of the child? (4) Does the child of this grade actually read it with pleasure? "

The organization of varied reading materials must be systematic. Miss Kaufmann has set up six criteria which enter into the problem of organizing materials.[1]

(1) The general merit of content.
(2) The use or abuse of a plot.
(3) The adaptability to oral or to silent reading.
(4) The character of the lesson helps, if any.
(5) Analysis of the content as a whole to find its special features.
(6) The specific plans required for the teaching of the material.

These criteria as well as others are given further treatment in Chapters XIII and XIV. The Winnetka plan of em-

[1] Kaufmann, M. L. Planning the Use of the Varied Reading Materials. *Elementary School Journal*, XXI, 380–489. January, 1921.

ploying varied reading materials, and then testing the effects of the reading is another example of careful selection and organization.

TABLE XLVI

The Effect of Good Teaching upon Relatively Unpopular Poems

(The poems were paired as shown in the table and "superior" or "inferior" teaching was conducted as indicated — the parentheses indicate that "inferior" teaching was conducted for a poem.*)

Class Tested	First Pair		Second Pair	
	Nautilus	The Tiger	Good News	Sheridan's Ride
A	62%	(38%)	37%	(63%)
B	(19%)	81%	(18%)	82%
X	78%	(22%)	87%	(13%)
Y	(27%)	73%	(21%)	79%

* Adapted from Hosic, *op. cit.* Negative or inferior treatment consisted of writing on the blackboard a number of formal questions upon the details of the poem studied and then giving the class a period for silent study of the lesson in preparation for answering the questions. Positive or superior teaching consisted first of arousing the pupils' experience and interest so that when the poem was presented it fulfilled a desire or solved a problem already in the pupils' minds; second, of presenting the selection as a whole by clear and effective oral reading; third, of dwelling upon the meaning of the selection as a whole; and, fourth, of providing sufficient repetition to enable the pupils to build up in their minds the wealth of pictures and suggestions in which the poetry abounds.

The relation of the quality of teaching to the selection and organization of content. It is necessary to show not only that varied materials can be used in the teaching of either oral and silent reading; it is necessary to show also that children can be interested in certain selections

and in certain forms of literature. It has been found, for example, that most pupils of Grades VI to VIII dislike Holmes's *The Chambered Nautilus*. Is this dislike a necessary accompaniment of the use of this poem in these grades? This question has been answered by Hosic.[1]

Four poems were selected by Hosic for experimental teaching. The poems were selected because of the belief that with indifferent teaching two of them were interesting to pupils and two uninteresting. The two initially interesting poems were paired against the two initially uninteresting ones as follows: *The Chambered Nautilus* against Blake's *The Tiger*, and Browning's *How They Brought the Good News* against Read's *Sheridan's Ride*. The uninfluenced choices showed that of the first pair, *The Chambered Nautilus* was selected as the more interesting by only 21.5 per cent of the 131 pupils who judged the poems; and that of the second pair, *How They Brought the Good News* was selected by only 14.5 per cent of the 125 pupils who judged them. This showed that two of the poems were at a disadvantage when paired with the poems selected by Hosic. If equally good teaching of each of the four poems were conducted, one might expect the relative amounts of interest in them to remain about the same. Superior teaching of the two less popular poems would, however, be expected to make them relatively more interesting to children than the popular poems when badly taught. Table XLVI shows that superior teaching of the less popular poems did arouse an interest in them which surpassed the interest in the badly taught popular poems. This investigation showed, therefore, that certain selections may be unsatisfactory when teaching conditions are bad, but that good teaching conditions can raise the selections to the level of

[1] Hosic, J. F. *Empirical Studies in School Reading*. Teachers College, Columbia University, Contributions to Education, No. 114. 1921.

superiority. That is, the quality of teaching determines to a certain extent the choice of reading materials.

Another study of the effects of superior classroom teaching has been reported by Hanes and McCoy.[1] One portion of their report deals with the cultivation of the interest of high-school juniors and seniors in the type of literature which is commonly of least interest to pupils, namely, the essay. In cultivating interest in essays, an informal method of teaching was employed. The following quotation indicates the general method of approaching the essay:

"Since the boys in Classics III–IV were unfamiliar with essays of the whimsical and the reflective type and only a little acquainted with those of the biographical type, the first problem was one of advertisement. The instructors were faced with the question: Just how can essay material be most attractively presented to boys who have never read prose of the more serious sort and who probably are prejudiced against essays? The first answer to this question was found in much oral reading by the instructor at the beginning of the project. Sometimes a complete essay was read, sometimes short extracts from essays. The instructors were guided in their choice of such reading material by their own enthusiasm for certain selections and by their knowledge of the appeal of certain essays to boys between fifteen and eighteen years of age. Very often the selection was made with some particular boy in mind, e.g., Stevenson's *Inland Voyage* to catch a boy who had made a canoe trip down the Illinois River last summer, and Briggs's *College Life* for several who had the ethical attitude toward life and literature. This reading was not done to impart information and was therefore interrupted only for the briefest explanations of points not easily understood and

[1] Hanes, E. F., and McCoy, M. J. Organization and Technique of a Teaching Unit in English Classics, 137–148. *Studies in Secondary Education*, I. Supplementary Educational Monograph, No. 24. University of Chicago, 1923.

for interpolation of personal anecdote or reaction that might increase the interest or appreciation. It continued as long as marked attention was shown — often for thirty minutes, seldom for a complete period. Among the readings were: Macaulay's *Life of Johnson*, read entire, with considerable attention to the author's style, selections from A. Edward Newton's *A Magnificent Farce* and *Amenities of Book Collecting*, Stevenson's *Inland Voyage*, Briggs's *College Life*, Pepys' *Diary*, Lamb's *Essays*, the *Sir Roger de Coverley Papers*, and current magazines. The part of the class period not used by the instructor for oral reading was spent by the class in silent reading from the books and magazines on the reading-tables."

This informal and effective introduction was followed by informal discussions, silent reading periods, and talks by the pupils. The success of this teaching unit was evidenced by voluntary reading of essays, avowals of interest in essays, and creative work attempted in the essay form. The essay topics selected for this creative work indicate that the ending of the teaching unit as well as its beginning was informal, interesting, and effective. The topics upon which the pupils wrote are as follows, in order of their frequency:

Male Flappers
Mirrors of Belfield Hall
A Point of View in School Athletics
Hypothetical Meditations of an Actor
A Mountain Pilgrimage
An American Inland Voyage
School
Camping Caricatures

Summary. Reading material should be selected and organized so that the mechanics of beginning reading as well as of later reading can be developed in connection with

meaningful content. The training in mechanics should be immediately useful to the pupil and related as nearly as possible to the reading to be done during later stages of development. Progressive teachers show great resourcefulness in amplifying the content of courses in reading by adding a variety of materials. The purposes of such amplification are two: the enlistment of the fullest possible participation of their pupils and the provision of specific training in reading many types of materials.

In selecting and organizing materials for reading, systematic procedure must be followed. This procedure must be based upon a knowledge of the types of activity required for adequate training in reading as well as upon legitimate criteria for judging the merit of the content itself. When armed with this knowledge and provided with suitable materials, skillful teachers succeed in the attainment of the objectives of the course in reading. The astute teacher or supervisor selects material within the capacity not only of his pupils but also of himself. For the logical conclusion of this chapter is that the selection and organization of reading materials depend very largely upon the quality of classroom teaching. Given excellent classroom teaching, this conclusion may be stated as follows: Excellent material for reading and literature includes all kinds of important literary products that are within mental grasp of pupils and the teaching capacities of teachers.

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CHAPTER XI

DIAGNOSTIC AND REMEDIAL WORK IN READING

Modern conditions require diagnostic ability. The days of the untrained practitioner are numbered. Education is now conducted on too large a scale to permit children to loiter through the elementary school and later waste their adolescent years in inefficient reading of high-school textbooks. Public policy as well as individual interests require teachers to discover the reading ailments of pupils and then prescribe remedies for the curable cases. The teacher's formula is therefore, first, diagnose; second, prescribe and apply remedies; for diagnosis is futile except as a guide in planning and conducting remedial work.

The meaning of diagnosis in reading. Diagnosis is not a recent development, for history tells us that the great teacher, Vittorino, often began his day's work by diagnostic interviews with his pupils. So early in the day were Vittorino's calls upon his boys that he had to carry a lantern to find his way from one boy to the next. Instead of beginning such work at dawn, teachers of the century just past gained a reputation for employing the hour following the school day for the application of diagnostic and remedial measures to their pupils. No doubt teachers and pupils of our time prefer to conduct their work in the plain light of day, but, early or late, diagnostic and remedial work is a necessity for many pupils. For this work, the modern teacher's equipment is as much superior to Vittorino's as electric flashlights are to Vittorino's lantern.

Diagnosis in teaching reading is commonly applied to the process of discovering a pupil's reading deficiencies. Some-

times such diagnosis is conducted with a complete laboratory equipment; sometimes, with only a school reader. In many cases the diagnosis, so far as any is made, is carried on while the pupils are "taking their turns" reading or discussing the day's lesson; such diagnosis as this is often followed by a more exact investigation during which the teacher gives her attention to a single pupil. Skill in diagnosis has recently developed very rapidly, because teachers have learned to employ new instruments for discovering pupils' ailments. Similar progress has been made by professional investigators; instead of delivering generalities upon educational matters, they have become specific and have devised new methods of treating educational problems.

Reading tests. The chief instrument in diagnosis is the standardized reading test. Such a test may measure either oral or silent reading and, if silent, may be given either to single individuals or to groups. Certain tests have outstanding advantages for special forms of diagnosis. Among the tests most widely used are the Gray Oral Reading Test, the Monroe Standardized Silent Reading Test, and the Thorndike-McCall Reading Scale.

The Gray Oral Reading Test, which consists of twelve paragraphs of increasing difficulty is the test most commonly used in measuring the oral ability of children in Grades I to VIII. This test has the following advantages: standard scores for each grade have been determined upon the basis of the reading ability of thousands of children; it can be given easily after a small amount of practice; it measures elements which are important in both oral and silent reading; it gives opportunity for the tester to make careful observation of individual pupils.

The Monroe Standardized Silent Reading Test is really a series of directions to pupils. It has been criticized for its

requirement that pupils not only read but also interpret and use what they have read. The test is, therefore, said to be not merely a reading test, and its scores are said to be unreliable indices of pupils' reading ability. Although there are ample reasons for these criticisms, one can still argue that the test measures types of ability upon which efficient reading is dependent. The chief advantages of this test are as follows: it can be given to large or small groups of pupils of Grades III to XII; it shows the ability of pupils to interpret and use what is read; it is not dependent upon memory; it tests both speed and accuracy; it indicates the degree of care taken by the pupils, whether they are very fast and accurate or very fast and careless.

Another silent reading test which has many advantages not possessed by others is the Thorndike-McCall Reading Scale. This test does not depend upon pupils' ability to remember what they read; it can be given to large or small groups of children of Grades III upward through the second year of high school; it has ten forms of equal difficulty, so that it can be administered monthly if desired; the scoring of it is not difficult and is itself a diagnostic process; it presents reading problems which are exactly like those commonly encountered in and out of school; it tests both speed and accuracy; its norms have been carefully established; by use of the directions which accompany the tests, the scores made by pupils can be readily computed in terms of reading ages; by finding the ratios between pupils' mental ages, accomplishment quotients can be found.

Examples of the use of tests in diagnosis and the planning of remedial work. *a.* **The utilization of students in training.** A form of diagnosis which with slight modifications can be conducted by any teacher or principal was successfully employed in the Oshkosh State Normal School

during the summer of 1916.[1] The following account of the Oshkosh experiment illustrates the method of diagnosis and also the use which can be made of the results of reading tests.

At the beginning of the summer session the Kansas Silent Reading Test, a group test similar in form to the Monroe Silent Reading Test, was given to all the training school pupils of Grades III–VIII. The papers were scored at once so that the pupils having the lowest scores could be found. The next day individual testing with the Gray Oral Reading Test was begun. By selecting the pupils with the lowest scores on the Kansas Silent Reading Test, it was possible to find immediately the pupils who were in greatest need of individual instruction. Some of these pupils were obviously misplaced by the Kansas test; these cases resulted from such causes as a slight indisposition, a broken pencil point, or a misunderstanding of the material of the test. Certain pupils made good scores on the oral test although they appeared to read unintelligently; a third test, the Gray Silent Reading Test, was given to them. By the use of this battery of reading tests, all the poorer readers seemed to have been detected and fairly accurately diagnosed.

The diagnosis showed several matters objectively upon the test sheets. For example, the Gray Oral Reading Test showed mispronunciations, substitutions, insertions, and repetitions of words. In addition to these defects, others such as a lack of intelligent interpretation, hesitancy, and gross bodily movements were recorded on the test sheets. When the pupils were assigned to student teachers, all of these records were carefully gone over, and recommen-

[1] Uhl, W. L. The Use of the Results of Reading Tests as Bases for Planning Remedial Work. *Elementary School Journal*, XVII, 266–275. December, 1916.

dations made for specific treatment. This treatment was modified somewhat during the training period, according to the needs of the pupils. Daily individual drills of fifteen minutes were conducted for each pupil who showed marked defects. This drill was continued for a period of from two to three weeks for each pupil. Just before the close of the six-weeks' term the Kansas Silent Reading Test was repeated for all pupils of the school. Also, the Gray Oral Reading Test was repeated for all pupils who had received individual treatment, and for a random sampling of the others.

The varied character of the deficiences in reading can be illustrated by accounts of individual cases. It was found that some pupils made low scores on account of extreme care, and others on account of extreme carelessness. A retarded fifth-grade pupil is an example of extreme carelessness. Each time that she took the Kansas Silent Reading Test she attempted all the paragraphs on the first two pages, but made scores of only 6.5 and 8.3, respectively, in the two trials instead of a possible 23.8 in case of no errors. Her particular difficulty was with small words which she read incorrectly. In spite of the fact that she received daily drills for three weeks, her scores in the first and second oral reading tests were 32.5 and 31.3, respectively. Another form of deficiency which has been detected in a few pupils can be illustrated by the case of a fourth-grade boy who attempted nine paragraphs but did only two correctly. When asked in paragraph six to underscore a certain word, this pupil underscored all the words in the paragraph. Also, he carried mentally the word *red* from paragraph one and wrote it as his response to paragraph seven.

The errors made by certain pupils were clearly suggestive of possible remedies in certain cases. For example,

a boy showed by his first oral test that much of his trouble lay in his substitutions of unrelated words for such words as *had*, *ran*, *the*, *then*, and *dog* in the first paragraph of the Gray test. In reading later paragraphs he substituted *pass* for *puss*, *kind* for *king*, and *house* for *room*. This type of deficiency was treated by drills upon very easy, interesting stories selected from school readers. In addition to directing this boy's attention to the story element, drill was given in reading short, easy sentences until they were correctly read several times in succession. His oral reading score rose from 13.8 to 27.5, largely on account of more accurate reading of easy words. A similar gain was made in the Kansas Silent Reading Test. The gains made by this boy were probably due partially to indirect influences, as a general toning up; his daily work showed the benefit of the specific drills used.

"Another common error — that of reading word by word rather than by thought groups — was found in several pupils. One boy who showed this defect to a marked degree was told in oral reading to 'look ahead' several words and to be certain before beginning to read each succeeding group that he could read through the single group connectedly. No attempt was made at first to have him read as a group more than the minimum number of words required for each thought group of words. This boy's oral reading score improved from 23.8 to 33.8 in the two tests; in the Kelly (Kansas silent reading) tests he improved from 5.9 to 9.3.

"In case of defects already described, as well as of others, a large part of the drill period was spent in reading easy, interesting material. This kind of material was used for two reasons: (1) it offered opportunity for concentration upon errors which the pupil was able to avoid by careful reading, and (2) such material could be selected from the mass of very interesting folk-tales, thus securing a story element which made emphasis upon meaning compara-

tively easy. For such defects as were shown in failure to do well in the Gray Silent-Reading Tests for the upper grades it was found to be well in some cases to drill pupils upon both easy, interesting material and upon harder abstract material. In such drills certain points touched upon in the selection were sometimes mentioned to the pupil before he began to read; at other times a synopsis was asked for or questions presented after reading. The need for effort upon the part of the pupil was emphasized in such cases." [1]

TABLE XLVII

Comparative Gains of the Pupils Who Were Drilled Individually and Those Who Were Not Drilled

	Grade	Drill Group Gains	Non-drill Group Gains	Percentage Gain: Drill Group	Percentage Gain: Non-drill Group
Kansas Silent Reading Tests	IV	3.4	4.2	71.	49.
	V	3.6	0.7	69.	6.
	VI	7.2	6.5	131.	66.
	VII	16.2	10.3	476.	75.
	VIII	9.7	1.0	141.	5.
Gray Oral Reading Tests	IV	9.4	4.6	37.	13.
	V	3.6	−2.7	11.	−6.
	VI	5.7	1.4	17.	37.
	VII	5.8	−0.7	17.	−2.
	VIII	8.8	2.5	35.	6.

Table XLVII provides a comparison of the scores of the pupils who were given individual drill with those who were not. By comparing the last two columns, it can be seen that the drill groups excelled throughout in gains in the silent reading scores, and in all except Grade VI in oral reading. The large gains in silent reading scores in Grades

[1] Uhl, *op. cit.*, pp. 270–271.

VI–VIII were made possible by the exceedingly low initial scores. Table XLVIII shows the individual records of the pupils of Grade IV. The first pupil, A. K., gained very

TABLE XLVIII

Individual Records of Pupils of Grade IV[1]

Pupil	Kansas Silent Reading Test				Gray Oral Reading Test				Gray Silent Reading Test	
	Test 1	Test 2	Gain	Per-centage of Gain	Test 1	Test 2	Gain	Per-centage of Gain	Rate	Quality
A. K.*	1.2	2.4	1.2	100.	17.5	27.5	10.0	51.7	.62	4.0
D. M.*	2.6	7.4	4.8	185.	31.7	33.8	2.1	6.6	1.3	6.0
C. L.*	2.6	5.4	2.8	107.	32.5	35.0	2.5	7.7	1.2	10.0
M. F.*	3.4	11.1	7.7	226.	31.7	41.3	9.6	30.3	.8	8.0
P. K.*	3.8	5.9	2.1	55.	13.8	21.8	8.0	57.9	.61	22.0
A. S.*	3.8	6.8	3.0	79.	3.8	33.8	30.0	789.5	.9	—
E. K.	3.8	2.6	−1.2	−32.	25.0	—	—	—	1.8	7.0
L. W.	3.8	2.6	−1.2	−32.	25.0	—	—	—	—	—
C. M.*	3.8	7.7	2.9	76.	31.8	37.5	5.7	17.8	1.2	5.0
C. K.	4.0	7.6	3.6	90.	38.3	41.0	3.5	9.1	—	—
M. P.	4.2	15.2	11.0	275.	43.8	45.0	1.2	2.0	—	—
G. E.	5.6	3.8	−1.8	−32.	—	—	—	—	—	—
E. P.*	5.9	9.3	3.4	58.	23.8	33.8	10.0	41.6	—	—
G. M.	6.3	13.6	7.3	116.	30.0	51.5	21.5	71.6	—	—
M. S.	6.5	5.1	1.4	22.	38.0	40.0	2.0	5.2	—	—
E. N.	6.8	8.0	1.2	18.	36.3	31.3	−6.0	−16.5	—	—
E. W.	7.4	9.1	1.7	22.	41.3	37.5	−3.8	−9.2	—	—
M. B.	7.7	13.4	5.7	74.	22.5	—	—	—	—	—
M. D. B.	7.9	13.7	5 8	73.	43.7	—	—	—	—	—
E. S.	8.9	16.3	7.4	83.	30.0	47.5	17.5	58.3	—	—
O. S.*	9.6	10.9	1.3	14.	41.0	46.5	5.5	13.4	—	—
W. F.*	10.0	14.2	4.2	42.	45.0	51.5	6.5	14.4	—	—
G. S.	11.5	14.6	3.1	27.	46.0	52.5	6.5	44.1	—	—
Total pupils	23	23			22	18			8	8
Medians	5.6	8.0	3.0	73.	31.8	40.0	6.5	17.8	1.2	7.0

*Given individual drill.

[1] Uhl, *op. cit.*, p. 274.

little in terms of the silent reading test. At the beginning of the individual drill, however, he read very loudly and made many gross bodily movements.

"He was drilled upon easy material orally only. O. S. and W. F. were drilled for five days; their failure to profit may be due to the very short period of drill and to the fact that they were not drilled for any specific difficulty. The pupil making the greatest gain in oral reading, A. S., read in the first test only paragraphs 1 to 4 of the Gray test; she made 9 errors in the first paragraph and 12 in the fourth. In the second test she made only 2 errors in the first paragraph and 4 in the fourth and was allowed to read through the seventh in which she made 8 errors." [1]

b. **The employment of unassigned teachers**. A diagnostic and remedial study was directed in the public schools of Toledo, Ohio, in 1921 by W. S. Gray. Three pupils who were retarded in reading were selected from each of ten schools for diagnostic and remedial work; the ten schools were chosen for special aid because they had unassigned teachers. First, general information concerning these pupils was obtained; this included data regarding home conditions, personal characteristics, school history, progress in various school subjects, and special difficulties in reading. Next, the following standard tests were given to the thirty children: the Gray Oral Reading Test; the Haggerty Reading Examination, Sigma I; the Courtis Silent Reading Test, number 2; the Thorndike-McCall Silent Reading Scale; and the Burgess Silent Reading Test. In addition to these tests a more detailed study of the pupils' ability to recognize words, parts of words, groups of letters, and syllables was made in a manner roughly similar to the use of flash cards.

[1] Uhl, *op. cit.*, pp. 274–275.

Individual reports upon the diagnosis together with recommendations for remedial work were made. The following summary illustrates the character of the individual reports:

"This is the case of a boy who is somewhat retarded in comprehension, who makes numerous minor errors in oral reading, and who encounters difficulty in the accurate recognition of polysyllabic words. He reads simple material very rapidly when he is not held for content. When asked to interpret what he reads, he reads much more slowly. Although he has a fairly wide span of recognition, he does not recognize details accurately.

"It is recommended that two weeks be spent in oral reading of third-grade material for the purpose of eliminating minor errors and careless mistakes. Precede the oral reading by silent study and spirited discussions of the content. In order to improve the accuracy of his reading and the effectiveness of his expression, read to him frequently.

"As soon as he gains confidence, introduce more difficult selections. These should be studied silently for their content. Assign problems for him to solve which will require a very careful reading of the passages. The content should be discussed thoroughly to insure a mastery of the essential points. When word difficulties are encountered teach him to secure the meaning and pronunciation from a study of the context. Considerable attention should be given to the analysis of polysyllabic words. Plan drill exercises on the words which cause difficulty. Teach the principles of syllabication and accent through a study of examples.

"Before asking him to read a difficult selection orally, give him an opportunity to practice it by himself. This will enable him to improve his grouping of words and the quality of his expression. It will be very helpful to read to him and with him by turns. Encourage him whenever possible. Provide audience situations for him.

"Organize phrase drills to increase his span of accurate recognition. Begin with short phrases at first and increase their length as rapidly as progress is evidenced.

"Prepare short exercises about fifty words in length for use in increasing his ability to interpret what he reads. Increase the length and difficulty of the passages as rapidly as progress is noted.

"Conduct timed reading exercises frequently to increase his rate of accurate silent reading. In all such exercises attention should be centered on the content." [1]

Remedial instruction planned in accordance with these reports was conducted for nine weeks after which Gray, Burgess, Courtis, and Thorndike-McCall tests were repeated to measure the progress made. The following informal account of the work of A. L., who made considerable gain in the repeated tests, is a fair sample of teachers' reports of the remedial work:

"Each lesson which was given during the training period included three distinct features: (*a*) phonetics and word recognition, (*b*) oral reading for quality and content, and (*c*) silent reading for content.

"The remedial period included thirty minutes of work each day. The first few minutes of each period were used for drill exercises in phonetics and word analysis. The remainder of the period was devoted to oral and silent reading for content. Throughout the entire training period, A. L. spent much time in supplementary outside reading.

"At the beginning of the training period, use was made of a chart of phonograms. A list of words was written on the board each day which contained the phonograms that had been studied. This gave her practice in recognizing words that contained familiar elements. Flash-card ex-

[1] Gray, W. S. *Remedial Cases in Reading: Their Diagnosis and Treatment.* Supplementary Educational Monographs. The University of Chicago. No. 22, 1922. Pp. 189–190.

ercises, based on words that caused difficulty during the reading period, were conducted each day. Drill upon words was discontinued as soon as they were mastered.

"*Thirty Fables Retold* were used in improving the quality of her oral reading. These stories are short, simple, and very interesting. They are printed on separate cards with a picture at the beginning of each story and with factual and thought-provoking questions at the end. When use was made of these stories, the pictures were discussed first to arouse interest. The stories were then read orally and the answers to the questions discussed. A record was kept of the errors she made during a reading lesson. These and other words containing the same phonetic elements were drilled upon for a few minutes each day.

"In order to stimulate thoughtful silent reading for content, supplementary reading exercises were assigned each day. On the following day, she was asked to reproduce what she had read or to answer questions based on the content. It was found that at home A. L. had no books suited to her limited reading vocabulary. She was, therefore, furnished with a list of simple, interesting stories and was encouraged to take home library books to read. This plan did a great deal toward establishing thoughtful reading habits.

"Paragraphs were cut from second- and third-grade readers. These were read silently for the purpose of securing a clear grasp of their meaning. After a paragraph had been read, a reproduction was required, and several questions similar to the following were asked: 'What kind of morning was it?' 'How did the birds show their joy?'

"Simple directions were printed on cards as an additional means of training her to grasp the content. The following examples are typical of many others which were used: 'Get a piece of chalk and put it on my desk.' 'Take hold of your left elbow with your right hand.'" [1]

[1] Gray, *op. cit.*, pp. 195–196.

Both the Oshkosh and Toledo experiments were facilitated by teachers who were not assigned to any particular rooms. For this reason this plan and others described in Dean Gray's monograph are not easily followed in all public schools. Both of these experiments show, however, that diagnostic and remedial work is possible, that pupils who receive special aid often show marked improvement in all their school work, and that carefully planned remedial work often produces rapid progress in pupils who have previously failed to profit satisfactorily by class instruction.

c. **Classroom training for special difficulties.** The experiment of Anderson and Merton at Stoughton, Wisconsin, shows that diagnostic and remedial work can be conducted in any school system in which supervisors and teachers are willing to coöperate.[1] The detection of some pupils who need individual aid is, of course, a simple matter, for every teacher detects such pupils daily. The diagnosis by means of standard test scores is also a simple matter; the accurate giving and scoring of tests is so easy that no one should be deterred therefrom. The more difficult task of carrying on remedial work can also, as Anderson and Merton showed, be conducted by classroom teachers. Indeed, much of the remedial work can profitably be pursued by all the pupils in a class.

The following brief outline of plans shows how resourceful teachers can make apparently difficult tasks easy. After diagnosis had been made in the Stoughton schools, it was clear that certain common types of reading difficulties existed; the following outline shows how instruction was adapted to meet these difficulties:

[1] Anderson, C. J., and Merton, E. Remedial Work in Silent Reading. *Elementary School Journal*, XXI, 336–348. January, 1921.

1. For short eye-span or word-reading — Flash cards (the making of these cards as well as their use will be described presently).
2. For inability to reproduce the content of a paragraph — "Pupils were told that every story has its time, place, and action elements" and that one who reads must search for key sentences which will unlock these elements.
3. For inability to give correct answers to specific questions — Four types of remedial work were used in overcoming this difficulty: (*a*) fact questions on a paragraph, (*b*) thought questions which measured the ability to interpret, (*c*) directions to pupils similar to those of the Monroe Silent Reading Test, and (*d*) the solving of riddles.
4. Inability to select main ideas — Short prose selections taken from discarded readers, magazines, and newspapers were mounted on cardboard. Pupils were asked to read the selections carefully and write the main points contained therein.

How these plans were carried out is described in the following quotation from Anderson and Merton's article.

A Typical Classroom Procedure

"The classroom procedure under this method of teaching reading varied from day to day. The following statement gives a true picture of the work going on in a third grade on a given day.

"The class consisted of three second-grade pupils, seven third-grade pupils, and one fourth-grade pupil. Subject promotion and demotion make this arrangement possible. The teacher passed out to three pupils cardboard boxes, each containing several hundred phrases which had been typed on narrow strips about one-half inch by two inches

in size and mounted on manila paper. These strips contained time phrases, place phrases, words in a series, prepositional phrases, infinitive phrases, etc. The source and the value of these phrases are explained elsewhere. The pupils sorted and classified them.

"One boy wrote a reproduction of a paragraph which he had read. This paragraph had been cut out of an old discarded reader and mounted upon cardboard. The boy had been reproducing a series of these paragraphs from day to day, each one more difficult than the preceding one. After he had read the paragraph, he laid it aside and wrote the reproduction. Then he turned to the opposite side of the cardboard upon which was written a set of questions based upon the paragraph. He re-read the paragraph in order to answer these questions. Then he wrote a second reproduction. The score for each was secured by counting the number of words essential in giving the thought. A record of this was kept by both teacher and pupil.

"Three pupils had selections from old readers, children's magazines, and school newspapers, mounted upon cardboard. On the back of each cardboard was a set of questions. The pupils searched the selections for answers to the specific questions. These selections were graded in difficulty. The answers to the questions were written out, scored by the teacher, and recorded in the progress books.

"Two pupils read books selected from the room library. They were in need of no remedial work and were permitted to read silently during the whole period. Later they reported to the teacher and to the class during a language exercise. In this report they told the story up to the part which they considered the most interesting, and then read this part to the class.

"While the members of the class were engaged in various reading assignments, the teacher was working at her desk with two pupils. She was giving them drill with 'flash' phrases in order to increase their span of recognition. The phrases had been taken from a selection which they

now read. In this reading special emphasis was placed upon phrasing. These pupils passed to their seats after their reading test and were given pages taken from old readers and magazines. They were asked to draw vertical lines dividing each sentence into its natural phrasing. At different times during the reading period any group of pupils received remedial instructions from the teacher and carried on the work indicated above at their seats.

"Another group of pupils then passed to the teacher's desk. They were given work in articulation. This is a local problem due to the fact that fully 75 per cent of the pupils are of Scandinavian parentage, and many of them hear no English spoken in the home.

"The pupils in the next group to receive special attention had been having difficulty in comprehension, because of overlooking or miscalling small but meaningful words. They were given drill in the silent reading of sentences like the following: 'Place the book *on* the table.' 'Place the book *under* the table.' 'Place the book *over* the table.'

"The pupils followed directions and attention was called to the change in meaning caused by the alteration of a single word." [1]

Another systematic attempt to classify and apply remedial treatment for reading disabilities has been made by Osburn.[2] This study is based upon an analysis of 1,910 wrong responses made by 230 children to the exercises contained in the Thorndike-McCall Silent Reading Scale. In addition to this analysis, Osburn included observations reported by teachers. These analyses enabled him to classify in the order of difficulty various exercises in comprehension. The errors in the Thorndike-McCall Silent Reading Scale were classified as shown in Table XLIX.

[1] Anderson and Merton, *op. cit.*, pp. 338–340.

[2] Osburn, W. J. *Graded and Diagnostic Paragraphs for Use in Silent Reading.* Mimeographed circular issued by the State Department of Public Instruction, Madison, Wisconsin. December, 1922.

TABLE XLIX

Classification of Pupils' Errors in the Thorndike-McCall Reading Scale, Form 4 [9]

Type of Error	Percentage Which Each Error Is of the Whole Number
Total failure to comprehend as indicated by copying irrelevant words	47
Distortion of answer by a preconceived idea	26
Failure to respond to the entire question . .	15
Stating answers which are made up of a combination of unrelated elements	6
Miscellaneous errors	6

In order to utilize this information, the following samples of remedial treatment were devised for each type of error. The samples are intended to serve as guides for teachers in planning specific training.

"1. Samples of questions which are for the purpose of training pupils to pick out phrases and clauses.

The two little girls who were lost in the woods became very tired and hungry. It began to grow dark under the trees. At last, when they could walk no longer, the children lay down and listened to the rippling of the water over the rocks in the stream. They could not go to sleep.

Write the words which tell who were lost.
Where were the girls?
Where did it begin to grow dark?
When did the children lie down?
Where were the rocks?

(Each of the required answers is a phrase or a clause.)

"2. Samples of questions which are for the purpose of training in vocabulary.

After the vesper service Mary's mother took her for a long ride in the country. They rode through long lanes with tall trees on both sides of them. The leaves on the trees were so thick that no one could see the birds that were singing among the branches. They had a nice ride and Mary hopes that her mother will take her again soon.

What time of day was it when Mary and her mother went for a ride?

Write the word which describes the foliage.

Did Mary appreciate her ride?

(Each question tests the child's acquaintance with a certain word. The first question hinges upon one word in the paragraph, while in the second and third questions, the words to be tested or practiced are in the questions themselves.)

"3. Questions which train pupils to resist the disturbance caused by preconceived ideas.

Fred is happy because his cousin John is coming to see him. It is raining and the roads are bad so John will have to come on the train. John likes to ride on the train but will not do so on the thirteenth day of the month. He thinks that thirteen is an unlucky number and is afraid that the train will be wrecked on that day. Fred is not afraid that he will be unlucky on the thirteenth of the month. He knows that accidents are just as likely on one day as another. He prefers an automobile to a train when he goes riding. The boys differ in what they think but they like each other and are glad of a chance to play together.

Write the name of the boy who likes to ride on the train.

Write the name of the boy who is right in what he thinks about the number *thirteen*.

Does the paragraph say that John likes to ride in an automobile?" [1]

[1] Osburn, *op. cit.*

Similar samples of paragraphs and questions are included in the Osburn circular for each of the following specific purposes: to give practice in learning the meanings of words which express relationship, to train children to give complete answers, to select relevant material from that which is irrelevant, and to stimulate thinking.

d. **Diagnostic and remedial work in high school.** During the year 1922–1923, several of the teachers of the West Allis, Wisconsin, high school conducted remedial and other special work for certain pupils in their regular classes. Before this work was begun, intelligence tests and the Thorndike-McCall Silent Reading Scale had been given to all the pupils of the school.

About twenty of the teachers selected two pupils each for special aid; some of the teachers selected very slow pupils while others selected the most brilliant. The work done with two of these pupils shows what may be done by giving only a very little recitation time to special cases.

One of these pupils, Peter, was selected because he was a problem to all his teachers. His record was as follows: Age 13 years and 11 months; Grade, VII; I. Q., 67; A. Q., 97 in the Thorndike-McCall Reading Test; Gray Oral Test, Grade I–B; Monroe Silent Reading Test, Grade III–A in rate and V–B in comprehension; Holley Word Test, Grade III–B. His informal reading for one of his teachers was very poor: in reading eight lines from a second reader he mispronounced many words — the easiest words as well as the more difficult ones; in reading from a seventh reader he read more rapidly than when reading from the second reader, but he mispronounced nearly every word and could reproduce nothing. Peter uses fairly good English and is active and good appearing. He dislikes all school work and does no outside reading. He works before and after school and on

Saturdays; he seems to be very tired when he arrives at school; he is " temperamental and nervous."

The method of giving special aid to Peter illustrates the individualizing of lessons in ways that aid the whole class as well as the individual in greatest need of training. A diary of the work planned especially to meet Peter's needs follows (this is the teacher's record; the class period was sixty minutes in length):

"Oct. 24, 3:30–3:45 P.M. Peter read and we discussed the passage read. I asked questions before and after he read each paragraph. He seemed to comprehend little of what he read and was satisfied with reproducing words.

"Oct. 25. I placed questions on the blackboard and asked all the pupils to find the answers in the assigned paragraph. Peter was more interested in finding the answers than when working alone. We had paper and pencil on desks and pupils copied in notebooks what we considered the most important facts about the New England states.

"Oct. 26. A pupil read what he had written the day before; I questioned Peter and others on work gone over the previous days. (Peter has a recitation every period in the day and thinks that he must be home at 4 P.M. Any help he gets must be during the recitation period.)

"Oct. 29. I wrote questions on the blackboard. Had different pupils read the paragraph and give answers to the questions. Pupils copied in their notebooks important facts about the New England states. Peter is in a VII–B division and three-fourths of the class need the same individual help that he does. About seven of the more apt pupils have the answers immediately and lose patience with the slower group.

"Oct. 30. I continued this method of conducting supervised study until Nov. 7.

"Nov. 7. I gave a written test to the VII–B division on material that we had covered during the last two weeks: a simple test calling for facts, not thought questions. Six

pupils got a grade of 100; six got a grade below 70. Peter's grade was 65. His paper was neater than it had been in former tests, and his grade higher. His attitude toward his work is better. He feels that I am interested in him."

Although Peter does not appear to have achieved a notable standing, it is significant that he made a noticeable improvement, that he voluntarily read six informational books, and raised his A.Q. in reading above 100 (normal for his mental capacity).

A very different record was made by G. Her I.Q. is 100; she is fourteen years of age and in the eighth grade. When tested informally on seventh-grade material she grasped the main points of the story, but was able to answer only about one-half of the detail questions asked. She works well because she wishes to earn high grades. Her teacher's report upon her follows.

"G.'s outstanding difficulties are these: lack of sufficient attention to details, mind too much taken up with main drift of story; too susceptible to suggestion of previous experience, *e.g.*, in the Monroe test made the error of saying that light was seen in the house, whereas the selection states clearly that it was in the forest; poor grasp of relational conditions, as shown in the Monroe test by stating that Asia was smaller than North America and the winds to be wet east of the Rockies; this explains her low grades in mathematics and science. (When asked how she accounted for these low grades, she appeared to be mortified, evidently hoping to improve by harder work.)"

G.'s record during the special training is related by her teacher:

"I have two eighth-grade pupils who are doing special work in reading according to instructions. Each one has been given a reader containing many interesting stories. Pupils so far have been reading to improve rate, to get the

story with a sufficient number of details to enable them to tell the story to the class in a way to interest and instruct the class.

"Pupils read a story when opportunity presents itself, taking time in minutes, and determining number of words in selection, thus determining rate per minute.

"G. seems to have discovered an added interest in reading, and has read much more than expected. She repeats the stories quite interestingly and seems to desire to improve her rate, which averages about 200 words per minute for stories, and about 100 words for narrative prose. She states that she is careful to get as much out of her reading as at the slower rate. Her reproduction seems to show improvement in getting thought; this may be due partly to improvement in expressing herself, resulting from practice. She is to continue her work for some time yet."

This pupil is in contrast with Peter, because G. is alert, interested in school, anxious to learn, and voluntarily continues drilling herself. Although she has nearly normal reading ability, she is willing to devote special care to the process of her reading in order to improve herself.

A third teacher took as her subject a ninth-grade pupil, H., whose I.Q. is 144. This brilliant thirteen-year-old girl finished the Monroe test in four minutes, and made a comprehension score of 65. Her score in the Thorndike-McCall Silent Reading Scale gives her a reading age of 18 years. Her teacher describes her as follows:

"Is an exceptionally bright student; quiet and unassuming, entirely unspoiled by her attainment. She has a very inquiring mind, reads all the books she can find, and enjoys them all. She enjoys scientific articles, mythology, nature books, fiction; but cares least of all for biography. I suggested John Muir and Mary Antin as examples of biography. She said that she had read them and gave me her opinion of them. Is an out-of-doors girl, too; enjoys

sports, hiking, swimming, skating. Her home life is ideal."

H. was interested in reading although she confined herself too closely to fiction. She followed her teacher's suggestions and seemed to be greatly interested in the types of literature suggested to her — biography and travel. As this pupil possessed an accomplishment quotient of more than 100 at the outset of the experiment, special drill was not necessary for her. Her teacher considered the broadening of the interest of this brilliant pupil of sufficient importance to warrant her spending time discussing what she had already read and a variety of profitable books for her subsequent reading. H.'s improvement is to be measured by the increased breadth of her reading interests.

e. **Remedial silent reading drill for all pupils.** Two more experiments must be reported in this discussion. One of these, that of O'Brien,[1] is devoted to remedial work, his assumption being that all pupils can be improved in the speed of silent reading. He experimented with some 1,200 pupils of Grades IV to VIII. Two types of training were given to these pupils: in Type I, drill upon speed was basic; in Type II, decrease of vocabulary was emphasized in connection with increase of speed. The upshot of the whole experiment is that the children developed very significant gains in speed. So great were the gains that Dr. O'Brien considers the results of the experiment an "*indictment of the present school regime in the teaching of reading, with its grotesquely misplaced emphasis on oral reading and its utter neglect of reading in the true sense of the term.*"[2]

These gains in the rate of reading have great significance

[1] O'Brien, J. A. The Development of Speed in Silent Reading. *National Society for the Study of Education, Twentieth Yearbook*, Part II, 54–76. 1921.

[2] O'Brien, *op. cit.*, p. 70.

when one considers the fact that the comprehension of the pupils remained practically constant throughout; that is, the pupils who were given special training gained not only over 100 per cent more than the control group in speed, but also approximately the same amount in comprehension. Dr. O'Brien's own conclusions about his experiment are that,

"Marked increases in rate can be effected in the upper grades when speed in reading is set as a definite problem for the pupils.

"When training in rapid silent reading is given to pupils not previously trained therein, the increase in rate tends in a general way to advance *pari passu* with the advance in the grade; the higher the grade, the greater the increase in rate.

"As compared with the gains which can be readily effected by systematic training in rapid silent reading, the increases ordinarily obtained in rate in the upper grades are so small as to indicate a condition almost pathological in character." [1]

f. **The improvement of silent reading by incidental training.** The last experiment to be reported in this chapter is one conducted by Professor Stone. This experiment was a coöperative one in which fifteen college classes participated. The students in Professor Stone's classes in Education were told something of the possibility of increasing their rates of reading while pursuing their usual library work. They were also given general directions for practice as follows: [2]

"*Conditions of Practice.* Every student was expected to use his required reading for practice and, in addition, all were encouraged to select some other especially interesting

[1] O'Brien, *op. cit.*, p. 70.

[2] Stone, C. W. Improving the Reading Ability of College Students. *Journal of Educational Method*, II, 8–23. September, 1922.

reading to be done under practice conditions. In the Educational Psychology class each student read two or more such books as Strayer and Norsworthy's *How to Teach*, Seashore's *Psychology of Daily Life*, Angell's *Chapters from Modern Psychology*, etc. In the Principles classes each read Miller's *Education for the Needs of Life*, Moore's *What is Education?* and Dewey's *Democracy and Education*. Several students also read such books as Bourne's *Education for Life*, Dewey's *Schools of Tomorrow*, etc., and some read books of fiction.

"The conditions of practice were standardized through the following regulations:

1. Practice one period between each two recitations.
2. Read as much as you can and at the same time comprehend well enough to summarize the main helps covered.
3. Use the same amount of time for each practice period, not less than thirty nor more than fifty minutes.
4. Omit unusual passages such as fine print, tables, summaries, etc. Read these if you wish, but not during the practice period.
5. Be specific in filling the record blank, *i.e.*, enter date, exact time, etc.
6. Limit the amount of time for filling the record to ten minutes.
7. Do not review your reading before making the record.

"As an aid to the observance of the above regulations and as a means of securing increase in comprehension along with increase in rate, the form given below was made available for each student on notebook pages.

"It will be noted that number 2 of the above regulations, 'Read as much as you can and at the same time comprehend well enough to summarize the main points covered,' places the emphasis on *speed*. Reversing this direction would have put the emphasis on *comprehension*. The direction would then have read, 'Comprehend as well as you

can; at the same time read as fast as you can; and be able to summarize the main points covered.'

RECORD OF SILENT READING PRACTICE

Name of Student.....Title of Book.....

Date	Time	Place	No. Lines Read	Main Topics Covered

"*Study and Improvement of Factors Conditioning Success.* After each student had practiced a few periods, class consideration was given to the factors conditioning success in silent reading. This study resulted in listing seven:

1. Physical conditions.
   a. Bodily.
   b. Environmental.
2. The recognition that silent reading is very different from, and vastly more important than, oral reading.
3. Freedom from lip movement and inner articulation.
4. Conscious striving to read rapidly with comprehension.
5. Effective concentration.
6. Long, well-controlled eye movement.
7. Ability to perceive meanings at a glance.

"After these had been listed and partially interpreted the assignment was:

'Study yourself to see how far each of these factors is helping and how far hindering you.'

"This led to the ways and means of improving the helpfulness of the various factors, and each student was furnished a formulation covering each factor. The following are samples:

Factor 1. Physical Conditions. As here used, this factor covers the condition of both the physical self and its environment. For the process of reading, the condition of the eyes is probably the most crucial. General physical fitness is also very important. All environmental conditions such as light, comfort, freedom from distractions, etc., are also included here.

Treatment: Rely on a first class specialist for the condition of your eyes, and keep physically fit. Adjust environmental conditions favorably. Realize the importance of these and keep at them until you have favorable conditions and have formed helpful habits.

Factor 2. Recognition of Distinctiveness and Importance of Silent Reading. Silent reading is for the purpose of *getting* material for study; oral reading is for the purpose of *giving* material in the language of the author. This distinction has been little recognized in the reading work of the grades and high school. With most teachers, silent reading has been resorted to as a makeshift, and condoned because of lack of time for oral reading. Only recently has there been a widespread definite attempt to increase ability in silent reading.

Treatment: Realize the relatively small place of oral reading in life's activities. Note the large use of silent reading in the study of all subjects, and in keeping up with the times through newspapers and magazines; and recognize that silent reading is an improvement over oral reading, just as speech is an improvement over gesture.

* * * * * * *

"*Diagnosing and Removing Hindrances.* Each student was encouraged and helped to diagnose his own case and remove his own hindrances. Brief reference was made to silent reading as such in class time; and individual conferences were encouraged. For about half of the members of each class, mere practice seemed sufficient to enable them

to make very perceptible improvement. For the other half, practice was ineffective because of hindering factors. The most serious of these hindrances was defective eyesight. Unless this could be remedied, practice was not allowed, for it seemed quite certain that defective eyes should not be submitted to the drive necessary to break up old habits and establish new ones. From five to ten per cent of each class consulted eye specialists and most of these secured sufficient relief to resume the practice.

"The most commonly reported difficulty was lack of *effective concentration.* Realization of this led to all sorts of adjustments, such as — stricter house rules during study hours, time study habit, a place study habit, and the removal of distractions such as pictures, letters, other books, etc.

"The most difficult hindrance to remove is inner articulation. Out and out lip movers are very scarce among college students. They have evidently been eliminated. The eradication of inner articulation was cause for strenuous effort.

"*Persistence in practice.* The need for persistence in practice was realized through frequent reference to achievement as portrayed in graphs. Records of successful students were shown to the entire class and the methods of achieving noted. Much help in obtaining persistence in practice was also secured through the realization that because of the nature of habit, continuous practice is essential to the reconstruction of the reading process.

"An effective means of promoting practice was the collecting of the progress graphs after each four or five readings. These graphs were checked, graded, and frequently made the basis of class discussions or individual conferences. The following points constituted the 'score card' for rating the graphs:

1. Number of readings, with dates.
2. Compliance with form as agreed.
3. Drawn on scale as agreed.

4. Reading record, according to prescribed form, attached.
5. Consistent gains." [1]

The results achieved by Professor Stone's students show that adults can greatly increase their rates of silent reading. The best readers among college students made the greatest gains; typical students increased their rates from fifty to one hundred per cent.

What any classroom teacher can do to improve slow pupils. The foregoing pages are devoted to a discussion of plans which can be applied in part by most classroom teachers. Certain aspects of the plans are, however, impracticable for certain teachers. For example, it is probably unprofitable for most teachers to devote fifteen minutes a day to each pupil who is retarded in reading; indeed, the very limitations of some of the more backward pupils precludes their advancing either very rapidly or very far. It is far more practicable for the teacher to arrange remedial work in such a way that the entire class can profit by it, as in the Stoughton plan. Even this plan has its limitations, for teachers often desire to train in such a way as to equalize the work of their pupils; specific training given to the entire class does not necessarily decrease the individual differences of the pupils. The great advantage of this plan is, of course, that bright pupils are not neglected while their slower classmates are receiving the benefit of specific training. Specific planning for groups within a class seems to be advisable until the schools are able to employ and make profitable use of unassigned teachers.

The discussion of what any classroom teacher can do to improve slow pupils can be facilitated by presenting in tabular form the outstanding features of the foregoing plans.

[1] Stone, *op. cit.*, pp. 11–16.

Oshkosh
- Ease and speed of diagnosis
- Availability of suitable material in school books
- Value of easy practice material
- Large gains of pupils trained

Toledo
- Economy of specific recommendations

Stoughton
- Class training for special difficulties
- Preparation of training material

West Allis
- Value of individualized instruction within regular classes
- Recognition of different lines of improvement
- Improvement of high-school pupils needed

O'Brien
- Phenomenal gains in silent-reading ability
- Gains in rate and comprehension *pari passu*
- Gains greatest in highest grades

Stone
- Gains in silent-reading ability by giving only incidental attention to it
- Gains greatest by ablest readers
- Development of plan of work

The organization of remedial courses in reading. This tabular summary of experiments in diagnostic and remedial work shows, first, that all the instances cited were of noticeable benefit to practically every pupil. Many other equally successful experiments could have been reviewed; the common experience is that systematic, specific training will produce results which are measurable by tests and appreciable by the classroom teacher. A teacher can, therefore, assume a hopeful attitude regarding the success of remedial work, provided she works systematically for at least two or more months.

Second, elaborate equipment is not necessary for either diagnostic or remedial work; although such equipment may be desirable, most of the successful experiments have been conducted with little or no special equipment save that made by the teachers and pupils themselves. The Stoughton experiment shows that teachers and pupils can make very practicable equipment by mounting words, phrases, and whole compositions on cardboard. Children can drill one another upon these materials, or the teacher can drill certain individuals.

Third, unless there is definite proof to the contrary, a teacher may assume that many of her pupils could improve their formed reading processes by practicing on quantities of easy, interesting material. While such reading is being done, there should be continued use of other reading matter which is reasonably difficult for the grade. Only the pupils who have by reading over-difficult material developed serious bad habits should be excused from the regular reading work; such pupils profit most by simply reading easier material until correct habits are established. This statement agrees with the general discussion of Chapter IX in which the contrast between the motor processes of easy and difficult reading was emphasized. By easy reading is meant reading in which the demands on the interpretative powers are slight; in such reading, therefore, the motor processes have few impediments. As a result, such reading may be employed to develop such desirable motor habits of reading as long eye-span, few fixations per line, fixations of short duration, and forward eye-movements. That these habits will be carried over into the reading of more difficult content of the same general character has been established experimentally.[1]

[1] *Cf.* Gray, C. T. *Deficiences in Reading Ability.* D. C. Heath, 1922. Also, O'Brien, J. A. *Silent Reading.* The Macmillan Company, 1921.

The reading of easy material necessitates the provision of many supplementary books for each grade. In order to be most effective, teachers have found that such books should not bear a mark for a grade lower than that in which the book is used, for children resent the reading of books obviously written for pupils younger than themselves. Not only should there be much easy reading; the reading should be of great variety, and if proper care is used in the selection of this material, the schools will no longer be criticized for offering training in the reading of only certain forms of literature.

Fourth, most teachers have one or two pupils who are much retarded. When teachers give careful attention to the diagnosis of such pupils and plan appropriate remedial work, it is found that, if properly conducted, this specific training will be of both interest and profit to all pupils. In classes where such training is conducted, it is commonly found that the pupils of relatively low mentality soon attain reading ages which either equal or exceed their mental ages. Very striking confirmation of the effect of training planned especially for slower pupils has been made in the junior high school of West Allis, Wisconsin, where pupils are placed in sections according to their I.Q.'s. When the Thorndike-McCall Silent Reading Scale was given in 1922, the pupils with low I.Q.'s. were found to have relatively high accomplishment quotients; that is, those pupils when given appropriate training exceeded their normal expectancy.

Fifth, teachers of the later elementary school grades and the high school should recognize the fact that their pupils are as amenable to improvement as pupils of the lower grades and that their best pupils will probably make the greatest gains if specific class training be given.

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CHAPTER XII

THE MEASUREMENT OF PROGRESS IN READING AND LITERATURE

Teachers and tests. During the last fifteen years American teachers have decided that anything which can be compared can be measured. If, for example, one pupil reads better than another, teachers assert that the amount of his superiority can be determined. By adopting this attitude and developing systems of educational measurement, teachers have risen from the plane of mere guesswork to the plane of exact knowledge.

The development of tests in schools finds an instructive parallel in the history of science, for exact measurement is the handmaiden of science. At the beginning of the modern era there was little exact measurement — and there was little science. At that time, however, a few men of genius devoted their lives to natural phenomena by actual first-hand study of nature. As examples, Copernicus with his profound constructive thinking, and Kepler with his mathematical calculations clarified the notion that the sun and not the earth is the center of our planetary system. Later, Newton, by means of his mathematical development of laws of motion and the law of gravitation completed the foundation upon which modern science has been built. The great advancements achieved in science during the modern era are due directly to a continued employment of the methods introduced by these men. Science still makes use of hypotheses, but it tests them by rigorous and exacting mathematical methods. The coalition of exact measurement with careful observation in science led to

spectacular achievements. So striking were these achievements that men in other branches of learning saw the advantages of the new methodology and began to devise plans for its adoption. A striking example is that of psychology. Prior to the year 1825 psychology was generally known as mental philosophy; knowledge of the mind was arrived at by speculation and conjecture. It was proposed by Weber about 1830 that mental philosophy be converted into a science by the methods employed in physics and chemistry. Of course there were philosophers who stoutly defended their ancient methods and violently opposed the application of measurement to mental processes. "Impossible," said they; but the names of those objectors have been forgotten while the names of men like Weber, Fechner, and Wundt who forged ahead with exact measurement form a part of the everyday vocabulary of modern students of psychology. These men made psychology a science.

It will no doubt be written in the year 1975 that the twentieth century found education a form of speculative philosophy. It will then be recorded that certain persons — names unknown — proposed that education remain a form of speculative philosophy. In contrast with the treatment accorded to these persons will be that accorded to the men and women who will have made education a science; for methods of exact measurement have already enabled educators to achieve results which are closely analogous to those of other sciences. Not only has the development of educational measurement raised education from the plane of speculation to the plane of science; this development has also raised the level of teaching as a vocation. No longer need teaching be based upon mere guesswork; instead, it can now employ careful methods of diagnosis, adequate methods of evaluation of materials and methods, and exact

measures of progress. This educational development is so closely connected on the one hand with the professional advancement of teaching and teachers and on the other hand with the application of statistical methods to education, that no professionally-minded teacher can afford to be ignorant of educational measurement.

A few teachers who are still skeptical about the value of standard tests in reading commonly assign one or more reasons for their skepticism. Of these reasons there are some which are good and plausible; and underlying these *good* reasons are others which are probably the *real* reasons for doubting the value of such tests. *Good* reasons which are often assigned are that standard tests greatly increase the work of the classroom teacher, that the tests make children nervous, that the tests are so constructed as to strain the pupils' eyes, and that the tests measure only the formal aspects of the subject. As most teachers know, these reasons are swept away as soon as the facts of the case are collected: a standard test takes little if any more work than any other test given by the teacher; standard tests do not make children any more nervous than any other tests — children usually regard standard tests as games and enjoy them; standard tests are not given often enough nor are they of sufficient duration either to make a child nervous or to strain his eyes; tests do measure the formal aspects of reading, but this is not an argument against them, because the formal aspects are essential elements of the reading process. At any rate, such tests as the Thorndike-McCall and Monroe standardized silent reading tests and others measure interpretative ability just as thought questions do when asked by the teacher.

Confessions of teachers who have been converted from a state of antagonism toward tests to a favorable attitude toward them have revealed three of the *real* reasons why

teachers are sometimes skeptical about tests. These converts say that they once objected to standard tests because such tests require exactness, remove the measurement of the pupils' work from the teacher's control, and lay open the teacher's work before all persons who care to examine the records. Although one will readily grant the truth of these *real* reasons, they argue not against tests, but against teachers' attitudes. There is no scientific reason why a conscientious teacher should fear exactness, fear to have the results of her teaching examined, or fear to have her pupils' records exposed. Only in the case of teachers whose supervisors are ignorant of individual and local differences among pupils can possible injury come to the skillful teacher; and a teacher so situated had better leave such a supervisor! The confessions of teachers who have been converted to a favorable attitude toward tests point the way to other teachers who are willing to be converted; "Give one good test a thorough trial," say the converts. As all teachers believe in some kind of tests and examinations, this formula for conversion is very easy to follow.

Difficulties encountered in the measurement of reading ability. In the early days of the Gray Oral Reading Scale — 1915–1917 — this comment was frequently heard, "The Gray test may measure certain elements of reading, but it neglects other equally important elements." No one, and least of all the author of the test has ever claimed that it measures all the elements of oral reading. For example, it neglects expression in oral reading, although expression is often the key to the measurement of the reader's understanding of what is read. While no one doubts the importance of expression, yet it will be admitted that expression is composed of and dependent upon a number of elements some of which can be measured. By measuring the pupil's ability to pronounce words correctly and in proper

order, and to pronounce without repetitions or substitutions the words on a printed page, the Gray test does measure the child's control over certain fundamental elements of expressive reading. Teachers of oral reading have yet to devise a test which measures adequately such important elements as inflection of the voice and slight variations in the tempo of reading.

As in oral reading so in silent reading, the first attempts to devise standard tests were concentrated upon the formal elements. For example, the ability of the pupil to organize and reproduce what he reads was at first relied upon to indicate the pupil's silent reading ability. The Gray Silent Reading Test following this cue, consisted of short passages which were read silently; afterwards, reproduction of the content of the passages was attempted both in response to questions and informally. The comprehension score was thus based upon the number of questions answered correctly and the amount of content reproduced. While it is true that a pupil is unlikely to be able to reproduce the content of a passage which he has not comprehended or organized while reading it, he may yet be able to comprehend a passage and then forget the content before he reproduces it; particularly is this true if the passage is uninteresting. The results of this method of testing silent reading ability were influenced by the pupil's memory and interest.

Another difficulty in the measurement of silent reading ability was encountered in dealing with the apparently simple element, speed or rate of reading. The Gray Silent Reading test measured speed by allowing the pupil first to get under way in his reading and then timing him for the remainder of the passage. This method was made possible by having each passage printed in three columns; it was then possible for the tester when sitting in front of the child to record the time at which the pupil's eye began the second

column. The rate was then computed by dividing the number of words in the remainder of the passage by the number of seconds required for the reading of it. This method of measuring speed has been difficult because of the amount of time required when a large number of pupils have to be tested.

When the measurement of comprehension was attempted still another difficulty arose. This difficulty led to the formulation of tests which required pupils first to read short passages and then manipulate the meanings derived in the performance of simple tasks. This plan is exemplified by the Kansas Silent Reading Test. For example, one of the passages of the Kansas test reads as follows:

"Here are two squares. Draw a line from the upper left-hand corner of the small square to the lower right-hand corner of the large square."

That is, the method of measurement employed in these early tests made demands over and above the process of merely comprehending what was read. Success in this test was, however, not dependent upon memory because the material was before the pupil throughout the test.

Dependence of tests upon the objectives of reading. The attempts to measure progress in reading have necessitated the formulation of clear objectives of reading. As in all

measurement, the measurement of reading is dependent on a knowledge of the goal and the direction to be traveled in order to arrive at the goal. No traveler's progress can be measured unless his destination be known; his rate of travel might be rapid, but his progress zero or even worse than zero. For example, if a man in Indianapolis has St. Louis as his goal, he may travel very rapidly toward Columbus, Ohio, without making any progress. So in reading, one may desire to become an efficient reader, but if he receives only such training as perfects his oral reading, he may still be a very inefficient silent reader. If then, skill in silent reading is the most important goal of reading, tests of progress must measure other elements than simply those of oral reading. Analyses of silent reading have shown that it is dependent on fundamental processes only a part of which are cultivated by oral reading and some of which are injured by excessive drill in oral reading. The case of the measurement of oral reading to determine progress in silent reading is, therefore, somewhat unlike the measurement of the traveler's speed of traveling toward Columbus to find out his progress on his journey to St. Louis; it is more like the measurement of a traveler's progress from Indianapolis to St. Louis if the traveler proceeds by first going to Chicago and thence to St. Louis. The route in either case is roundabout, and speed of travel is likely to be greater than actual progress.

Dependence of tests upon the forms of reading. Some reading is for rapid pursuit of the main points; some is for quiet contemplation. These two forms are equally efficient for their respective purposes, but they are not interchangeable. For example, one reads an encyclopedia to find out facts quickly; or, one reads a Van Dyke essay or a Swinburne poem to enjoy the prolonged contemplation of pleasant thoughts. A given test is unlikely to measure equally

well all the elements that constitute efficient reading in these two forms.

At other times one reads slowly because the purpose of the reading is to evaluate critically. Again one reads to obtain directions for one's day's work, or, still again, to reproduce the content of the printed page. In either of these cases the predominant elements are different from those which prevail when one reads easy stories or technical literature, or when one reads orally for a listener's pleasure.

These considerations require that a test be comprehensive enough to cover all these forms of reading, or else specific, in which case the test should be used only for measuring the form of reading for which it is intended.

Dependence of tests upon the purposes of teachers and supervisors. There are three main purposes for giving tests: the judicial, the diagnostic, and the instructional. In giving tests for judicial purposes, supervisors may wish to obtain data for use in comparing different school systems. Thus a superintendent of Burlington, Iowa, may wish to compare the work of his pupils with that of the pupils in Burlington, Vermont, or Detroit, Michigan. He can now select a test which has been widely used and make his comparison with the standard scores and, in the case of many tests, with the scores already reported from many individual cities. In order to enable the superintendent to make such comparisons, a test which has been widely used is required. At other times, a supervisor may desire only to compare the work of different teachers and schools in his own city. Here again, a widely used test is desirable, because its scores are most likely to be well standardized. In still other cases one may wish to compare the results attained after different methods of teaching have been employed with different classes.

When tests are given for the purpose of comparing cities, schools, and methods, as in the diagnosis of individual pupils, more than one test is often desirable, because each test then serves as a check upon the others. It is also important early in the school year to measure pupils' abilities and to report the results to teachers promptly. In testing for judicial purposes as in all other testing, it is essential that the tests possess as high degree of reliability as can be obtained.

As the diagnostic values of tests have already been discussed in Chapter XI, the instructional values will be discussed next. Tests have direct instructional values when they are given (1) to spur pupils to greater work, (2) to indicate the rate of progress, and (3) to clear the ground and see what remains to be learned. As a spur to progress a short interesting test like the Monroe Standardized Silent Reading Test is probably as good as any. When this test is used, pupils can have their scores the day following the test and be given helpful suggestions for their own improvement. An additional advantage of this test is its low cost.

For the other two instructional purposes, the measurement of progress and stock-taking, tests must be so devised that alternate forms of equal difficulty can be used. For these purposes, also, a test must be easily given and scored; otherwise, the time required for its administration would make its use impracticable. The Thorndike-McCall Silent Reading Scale with its different forms, meets these needs.

Up to this point nothing has been said of the measurement of a form of ability which teachers of literature try to develop. This ability, literary taste, has only recently been measured except by the informal methods of teachers. Abbott and Trabue have, however, devised a test by means

of which one's literary taste can be measured with a fair degree of accuracy.[1]

"The test consists of a number of poems ranging in quality from Mother Goose to Bridges or Masefield, each accompanied by three versions 'spoiled' by alterations, some grossly and some delicately. Each reader is asked to name one of the four versions as best." The ease of administering and scoring this test as well as its possible value in showing objectively different degrees of literary taste commend it to high-school teachers of literature. This test has the additional instructional value of illustrating to pupils some of the differences in literary style.

The vocabularies of reading tests. Strange to say, the vocabularies of tests have until recently received little attention. While it is clear that pupils' mastery of fundamental reading processes is measured in part by their control of a reading vocabulary, there has apparently been little more than a chance agreement between the vocabularies of tests and the actual reading vocabularies of school children.

There is, of course, a more plausible reason for uncommon words in an oral than in a silent reading test, because an oral test may properly be expected to test the ability to attack new words. Ballenger has recently reported a comparative study of the vocabularies of fourteen standardized reading tests.[2] After tabulating the frequency of the words which occur in these tests, he compared the

[1] Abbott, A., and Trabue, M. R. A Measure of the Ability to Judge Poetry. *Teachers College Record*, XXII, 101–126. March, 1921. The reliability of the test is not so great as that of many other tests. *Cf.* J. B. Wyman and Miriam Wendle: What is Reading Ability? *Journal of Educational Psychology*, XII, 518–531. December, 1921.

[2] Ballenger, H. L. A Comparative Study of the Vocabulary Content of Certain Standard Reading Tests. *Elementary School Journal*, XXIII, 522–534. March, 1923.

lists with those compiled from thirty school readers [1] and with those contained in Thorndike's word list.[2]

TABLE L

The Percentage of the Running Words of Standardized Reading Tests Occurring Also in the Thorndike Word List and in School Readers [3]

	Thorndike List, First 1,000 Words	Thorndike List, Second 1,000 Words	Thorndike List, Third 1,000 Words	In All 30 School Readers	In None of 30 Readers
Thorndike-McCall form 1	73.92	4.78	2.96	43.17	7.57
Gray Oral	77.49	4.52	2.08	48.07	10.92
Monroe Silent Reading Test, form 1, Grades III–V	76.00	5.96	2.50	45.08	3.61
Monroe Silent Reading Test, form 1, Grades VI–VIII . . .	76.44	6.97	2.67	43.51	4.15

Ballenger's results for the four tests which have been discussed here are summarized in Table L. The striking fact about this table as also about Ballenger's own tables from which this one was derived is the variability between the different tests examined. His conclusions indicate that

[1] Packer, J. L. The Vocabularies of Ten First Readers. *National Society for the Study of Education, Twentieth Yearbook*, Part II, pp. 127–144. 1921. Housh, E. T. Analysis of the Vocabularies of Ten Second-Year Readers. *Seventeenth Yearbook*, Part I, 40–45. 1918. Miller, W. S. *Analysis of the Vocabularies of Ten Third Readers*. Manuscript in University of Iowa Library.

[2] Thorndike, E. L. *The Teacher's Word Book.*

[3] Adapted from Ballenger, *op. cit.*

the vocabularies of tests will be open to criticism until they are made to accord more fully with the lists of words which are most important in the general reading vocabulary. His chief conclusions are as follows. There is great variability in the vocabularies of reading tests; only eleven words are common to the fourteen tests examined: *a, and, but, for, in, of, that, the, this, to,* and *with.* Of the 2,039 different words in the fourteen tests, 1,106 occur only once in the Thorndike word list. Many words contained in the tests are of doubtful importance as shown by the fact that approximately one-third of them do not occur in the first 3,000 words of the Thorndike word list. As shown in Table L, however, all except about one-sixth of the words in these four tests occur in the first three thousand words of the Thorndike list.

The characteristics of a good test. The selection of tests depends upon the objectives of reading for respective grades, the forms of reading recognized as essential, and the purposes for which the tests are given. The foregoing discussions show that a good test possesses the following qualities: it can be easily given and scored; its norms have been made reliable by thorough standardization; it is sufficiently refined to indicate the progress of pupils when given frequently; its results are little influenced by such matters as memory and puzzle-solving ability; it is adapted in both vocabulary and content to the grade in which it is to be given; it measures control over the fundamental processes of essential forms of reading.

Examples of the use of tests. The comparison of different school systems. In addition to the examples of the use of tests cited in Chapter XI, two other examples are here discussed. The use of reading tests in the Gary school survey is an excellent example of the use of the results of tests for comparative purposes. Among the tests

given to the Gary school pupils were the Gray Oral Reading Scale and the Kansas Silent Reading Tests.[1] In addition to making the usual comparisons of a city's scores with the standard scores, Courtis compares in Tables LI and LII the Gary scores with those attained in other parts of the United States.

TABLE LI

Ability in Oral Reading — Gray's Oral Reading Scale

Scores by points according to Gray's methods. From each class at Gary at least ten children were measured (thirty children or more from classes in grades three, five, and seven). Selections were made on basis of teacher's judgment, the three best readers, four average readers, and the three worst readers being chosen.

Grade	II	III	IV	V	VI	VII	VIII
Number of children . .	102	346	126	297	134	219	52
Gary, Actual Average .	27	36	39	39	41	42	41
23 Illinois Cities . . .	20	27	40	44	45	47	—
Cleveland	42	46	47	48	49	47	48
Grand Rapids	44	47	49	50	48	48	48
St. Louis	47	50	52	51	51	51	51

This table is to be read as follows: In Gary 102 second-grade children, selected as representative children from the various classes tested, made an average score of 27 points when measured with Gray's Scale according to Gray's directions. Twenty-three cities in Illinois made an average score of 20 in the second grade, Cleveland — 42, Grand Rapids — 44, and St. Louis — 47.[2]

"The scores of the Gary eighth-grade classes are practically the same as the corresponding scores made by classes

[1] The Kansas Silent Reading Tests are similar in general form to the Monroe Standardized Silent Reading Tests.

[2] Courtis, S. A. *The Gary Public Schools; Measurement of Educational Products.* General Education Board, New York City, 1919. P. 272.

in other cities (Gary 18.7, Kansas 20.1, Iowa 20.6, Detroit 19.0, New Orleans 19.1, combined tabulations from all parts of the country 19.2). The scores of the third grade at Gary are very much below those made by other cities (Gary 2.5, median of country 5.3). That is, the abilities measured by the Kansas Reading Tests begin to develop later at Gary than in the conventional schools, but by the seventh and eighth grades the handicap of the late start has been overcome. The scores in the high school years at Gary are equal to or much greater than the corresponding scores in other cities, although the data for this statement are less complete than for the comparisons in the other grades (twelfth grade 29.6, median of country 29.7). As measured by the Kansas Reading Tests, the eighth grade product of the instruction in reading in the grades at Gary is equal to that of the conventional school."[1]

Considerable difference between the achievement of Gary pupils and that of more conventional schools was discovered and is shown in Table LII. Instead of equalling the work of other schools, the development of ability in oral reading parallels the development in other cities, " but at a level which is about a year below the average of other cities." The Gary scores for example, are about a year and a half lower than those of Grand Rapids.

" The differences in the performances of the Gary children as compared with those recorded for the average children in conventional schools are brought out by an analysis of the results. (See Table LII.) Thus, to read paragraph 4 the Gary eighth grade children required 18.7 seconds (Cleveland 16.62, St. Louis 17.85) and made 2.1 mistakes (Cleveland 1.24, St. Louis .73). That is, the Gary children read more slowly and made more mistakes than the children in Cleveland and St. Louis."[2]

[1] Courtis, *op. cit.*, pp. 287–291.

[2] Courtis, *op. cit.*, p. 270.

TABLE LII

Comparative Data for Rates of Oral Reading

Grade	Paragraph 1		
	Gary	*Cleveland*	*St. Louis**
2	70	124	124
3	130	162	150
4	160	183	184
5	168	200	178
6	196	212	191
7	210	199	190
8	204	241	179

Grade	Paragraph 4		
	Gary	*Cleveland*	*St. Louis**
2	73	119	110
3	106	143	137
4	125	165	167
5	155	183	173
6	178	204	187
7	179	207	207
8	196	220	205

This table is to be read as follows: The second-grade children at Gary read orally paragraph 1 at an average rate of 70 words per minute, while in both Cleveland and St. Louis the average rate for the same paragraph in the same grade was 124 words per minute. The second grade in Gary read orally paragraph 4 at an average rate of 73 words per minute, while in Cleveland and St. Louis the rates were 119 and 110 words per minute respectively.

On the basis of the simple material in paragraph 1, the Gary children in the upper grades read at the same or a higher rate than the corresponding children in the Cleveland and St. Louis schools. In the lower grades the rates are much lower. Based on the rates for paragraph 4, which is a little more difficult material, the rates of Gary are lower than those of the other two cities.[1]

* Based on an *Elementary School Journal* article, by W. S. Gray, November, 1916, page 182.

[1] Courtis, *op. cit.*, p. 280.

The Gary investigation illustrates a method of comparative study that has been conducted in many other cities. An elaboration of the same plan is exemplified by a cooperative study of reading by eleven Illinois cities in 1916. This study consisted of giving the Gray oral and silent reading tests to the children of the Grades II to VIII, tabulating the scores of the pupils, and comparing the records made by these Illinois cities with one another and with test records made by other cities. The value of this study in paving the way for better organization of courses in reading is shown in the following summary of the investigation.

"The cities of northern Illinois are securing effective results in oral reading. As compared with the best city systems in the country these schools are inferior in achievement to an amount not greater than the normal growth during two or three months. Among the schools of northern Illinois, however, different classes in the same grade differ in achievement by an amount equal to the normal progress during two years. In rate and quality of silent reading the schools of northern Illinois secure relatively less effective results. In rate of silent reading these schools are noticeably inferior. Upon the basis of this objective study of the achievement in oral and silent reading the following suggestions are offered:

"The lower grades form a peculiarly appropriate period in which the fundamentals of oral reading should be mastered. . . . Inasmuch as our study has shown that habits of oral reading are developed more effectively than habits of silent reading in the schools of northern Illinois, it follows that a portion of the time and effort now given to oral reading should be devoted to silent reading. In order to determine at just what point in the grades this change in emphasis should take place, it is necessary to bear in mind certain important facts. In the first place, by the time a

pupil has reached that stage in his development when he can read with ease and facility ordinary third-grade selections, his ability to pronounce words exceeds his ability to understand what he reads. At this point additional mastery of word pronunciation is less important than increased mastery of meanings. These meanings are best secured by coming in contact with words and sentences time after time in various connections. The large amount of attention which some teachers give in second- and third-grade classes to quantitative reading with emphasis on the thought side is a long step in the right direction. In the second place, by the time a pupil has reached the point where he can read orally with ease and facility rapid development in habits of silent reading may take place. The pupil at this period usually becomes interested in the subject-matter which he is reading, and his eyes run along the lines more rapidly than his vocal chords react. At this time silent reading becomes more economical and effective than oral reading as a means of securing thought from the printed page. It is impossible to state definitely when this stage is reached, inasmuch as schools vary most widely in achievement. It may be safely said, however, that instruction in silent reading should receive serious consideration in all the grades above the third. The records show that in many schools in northern Illinois pupils who are at the present time beginning work in the third grade have reached that stage in their oral-reading development when emphasis might profitably be shifted to silent reading." [1]

Examples of the use of tests. The measurement of work in a single school system. An example of the measurement of progress in reading is provided by Torgerson.[2] In the West Allis schools upon which Torgerson reports, two

[1] Gray, W. S. A Coöperative Study of Reading in Eleven Cities of Northern Illinois. *Elementary School Journal*, XVII, 262–264. December, 1916.

[2] Torgerson, T. L. The Efficiency Quotient as a Measure of Achievement. *Journal of Educational Research*, VI, 25–32. June, 1922.

different tests were used: the Thorndike-McCall Reading Scale and the Monroe Standardized Silent Reading Test. By combining the results of these reading tests with the results of intelligence tests, Torgerson shows also the way in which efficiency quotients may be used. The necessity for determining the efficiency quotient is clear as soon as one considers the variabilities in the intellectual calibers of different classes. One class may, for example, have an average intelligence quotient of 78 and another of 118; such a difference between two sections of the seventh grade was found in West Allis, and it was found that the test scores of these two sections exactly paralleled the mental caliber of the sections. Clearly it would have been unjust to the members of these sections and their teachers to have demanded the same scores or even the same progress during a year.

Table LIII shows the efficiency quotients for 732 pupils of Grades IV–VI. A few explanations will make clear the meaning of this table. The intelligence quotient is, of

TABLE LIII

Efficiency (or Accomplishment) Quotients as Derived from the Thorndike-McCall Reading Scale[1]

Number of Pupils	Grade	Intelligence Quotient	Achievement Quotient	Efficiency Quotient
136	IV–B	91	98	108
109	A	89	97	109
141	V–B	90	94	104
102	A	97	99	102
149	VI–B	105	98	93
95	A	95	91	96

[1] Torgerson, *op. cit.*, p. 28.

course, based upon an intelligence test. The achievement quotient is found by finding the ratio of the pupil's actual test score to the score or norm expected of a pupil of his age. The efficiency quotient, which is sometimes called the accomplishment quotient, is found by dividing the achievement quotient by the intelligence quotient.[1] If, for example, a pupil's reading quotient is 90 and his intelligence quotient is 100, his efficiency quotient is only 90. In order to have a normal efficiency quotient, 100, a pupil must attain an achievement quotient which just equals his intelligence quotient. The fourth- and fifth-grade pupils whose scores are shown in Table LIII are, therefore, achieving slightly more than their intelligence quotients lead one to expect of them, while the pupils of Grade VI are achieving less than their intelligence quotients presage.

"The situation as it may develop in an entire class is indicated in Table LIV. This table presents the quotients for the five children in a fifth grade who had the highest intelligence quotients, and for the five children having the lowest intelligence quotients.

"From these data it would appear that the slow pupil is more efficient than the superior pupil. Is this not a result of directing classroom instruction to the pupils of average intelligence and using every stimulus and incentive with the slow pupils to raise their standard of work? What has been done for the superior pupil? By putting forth a minimum amount of effort they have been doing as well as, or better than, the average pupil. They have been working under low pressure and have acquired habits of study and

[1] In terms of McCall's discussion of the Thorndike-McCall Reading Scale, Torgerson's achievement quotient equals McCall's reading quotient and Torgerson's efficiency quotient equals McCall's accomplishment quotient. See W. A. McCall, *How to Measure in Education*, Chapter III. The Macmillan Company, 1922.

work that represent a low rate of efficiency when compared with their superior intelligence.

TABLE LIV

Fifth-Grade Pupils' Quotients Based upon the Thorndike-McCall Reading Scale[1]

Pupils	Intelligence Quotient	Achievement Quotient	Efficiency Quotient
S. T. . . .	140	127.5	93
J. B. . . .	129	142.5	112
T. B. . . .	126	132.5	108
K. B. . . .	123	87.5	72
L. H. . . .	121	132.5	112
L. C. . . .	78	95	119
J. G. . . .	77	87.5	120
O. N. . . .	76	85	113
J. G. . . .	72	80	106
R. I. . . .	71	85	121

"By classifying pupils according to intelligence and readjusting the subject matter and methods of instruction to the needs of each group, the work of each pupil can soon be placed on a high plane of efficiency. This may be illustrated by the following example. During the first semester of the school year 1920–1921 the sixth grade in one of the buildings was divided into two sections under separate teachers. The pupils were not classified according to ability. At the beginning of the second semester, however, the pupils of high average intelligence were grouped together under one teacher. Twenty-eight pupils were in this group and the intelligence quotient was 105. Table LV shows the quotients of this group for Monroe's Silent Reading Test. The first two tests were given before the pupils were classified. The last test was given after one semester's work in the classified section.

TABLE LV

Gains in Efficiency Shown by Monroe's Silent Reading Test for Pupils of Grade VI[1]

Date of Testing	Achievement Quotient	Efficiency Quotient	Increase in Efficiency (per cent)
September median . .	105	100	—
January median . . .	120	114	14
May median	170	162	42

"The reader's attention is called to the fact that during the four months that the pupils were unclassified, the increase in efficiency was but 14 per cent but that during the four months from January to May — *i.e.*, during the period when those of high average intelligence were grouped together — it rose from 114 to 162 with a percentage increase of 42."[1]

The foregoing quotation shows some of the possibilities of standardized tests. As many teachers have asserted, such tests do little good if the results are not employed in such a way as to guide classroom teachers. By means of such data as those shown in Table LIV, however, a teacher can see that the work of most of the pupils is above the normal efficiency quotient, although S. T. and K. B. need coaching. In particular it is important that a pupil with such superior intelligence as K. B. should be improved, instead of allowing him to remain content with an achievement quotient nearly as low as that of the "borderline" cases, J. G. and R. I.

The discussion of the West Allis results has called attention to the necessity of considering the mental ability of

[1] Torgerson, *op. cit.*, 28 f.

pupils in determining standards for individual pupils, the use of successive tests within a single year, and the employment of the results of tests by classroom teachers in the organization of work for individual pupils.

What tests to use. In the administration and scoring of tests there is sometimes considerable dismay because the results of different tests disagree. A marked disagreement of the results of one test with those of another test may lead to the discarding of the results of that test. Unless care is exercised in this matter, excellent tests may fall into disuse, for disagreement between tests is not a certain sign of undesirability. There are several reasons why disagreement may exist between the results of good tests. Two tests may be of equal merit and yet disagree because one measures the mechanics of oral reading and the other the ability to interpret the printed page silently. Such disagreement is analogous to that of two measures of the success of a man's life: one test may be in terms of amount of wealth amassed and the other in terms of good accomplished; even though measures may be applied with precision and their results correct, there is sometimes a serious discrepancy between the results. Unfortunately, however, it is still true that certain reading tests are very unreliable measures: their results agree neither with those of other tests nor, when different forms of the test are given, do the results agree among themselves. It is, therefore, important that investigations into the reliability of tests be made.

Such an investigation has been made and reported upon by Gates.[1] The principal criteria by which Gates judged the tests which he investigated are as follows:

[1] Gates, A. I. An Experimental and Statistical Study of Reading and Reading Tests. *Journal of Educational Psychology*, XII, 303–314; 378–390; and 445–464. September, October, and November, 1921.

"1. Reliability or consistency. Do the subjects perform identically on each of several occasions?

2. Objectivity. Will different experimenters secure the same results?

3. Are the tests units properly equalized or defined?

4. Are the standards (norms) of achievement satisfactory?

5. Does the test properly differentiate or differentiate with satisfactory fineness, or register a sufficiently wide range of abilities?

6. Are the various editions (forms) of the test equivalent?

There are other criteria of more or less practical importance, such as cost, convenience to give or score, time required and interest developed among those taking it."

The subjects who took the following tests were the 120 pupils of Grades III to VIII then attending the Scarborough School:

"1. Brown's Silent Reading Test, Forms I and II.

2. The Burgess Scale, P. S., No. 2, Given twice.

3. Courtis' Silent Reading Test, No. 2, Forms I and II.

4. Monroe's Silent Reading Test.

5. Thorndike's Scale for the Understanding of Sentences, Alpha 2.

6. Thorndike-McCall Reading Test, Forms 1 and 2 in all grades; Forms 1, 2, 3, 4, 5 in Grades IV and VI.

7. Gray's Oral Reading Test.

8. Woodworth-Wells Directions Test.

9. Holley's Sentence Vocabulary Test.

10. A Vocabulary Test arranged by the writer.

11. A Pronunciation Test arranged by the writer.

12. Thorndike's Visual Vocabulary Test. Used in all grades, but, due to an error in administration, results of but two grades were reliable."

In addition to these reading tests the pupils were given a group of intelligence tests including the Stanford Revision of the Binet Test, Dearborn, National, Otis, Illinois, Haggerty, and Myers. Also, the judgments of teachers were obtained as a further check upon the validity of the tests.

From the mass of statistical data which grew out of this investigation, certain conclusions were drawn concerning the tests to which most frequent reference has been made in this book. The Gray Oral Reading Scale was found "to be an exceedingly useful instrument, especially for purposes of individual diagnosis partly for the reason that the one who experiments can observe intimately the particular reactions." This statement in addition to fairly high correlations obtained with comprehension, silent reading, and pronunciation tests, leads to the conclusion that the Gray test should be included in an adequate battery of tests. This test has, as already stated, the other advantage of wide use, careful standardization, and objectivity of its results.

The Monroe Standardized Silent Reading Test was found to have certain deficiencies. The rate score appears to be more stable than the comprehension score, owing to the fact that chance success in comprehension is possible in case of certain paragraphs. Also, the forms of the test for Grades VI to VIII are so easy that many pupils attain a perfect score. In spite of these handicaps, this test is recommended for use as a rough measure of ability. Since it is easy to administer, and since its rate scores are reliable, it possesses especial value in locating quickly the poorest readers.

For the measurement of the "power of comprehension freed of all the mechanical factors of reading," Gates found the Thorndike-McCall Reading Scale superior. The value

of the different forms for the frequent measurement of progress is indicated by the high correlations between the results obtained by the different forms when they were given on five successive days. Gates shows that the accuracy of measurement increases by giving different forms of this test; that is, if only one form is given, the result may deviate approximately three months from the true score; if two forms are given, the deviation will be less than two months; for three tests the deviation is about one month; and for four tests, less than half of one month. In order, therefore, "to measure monthly progress (of each individual) it will be necessary to secure a composite score of 3 or 4 tests, requiring $1\frac{1}{2}$ to 2 hours time." The progress of a class as a whole would not require the use of so many forms at one time.

A program for adequate measurement of progress in reading. In this chapter emphasis has been placed upon the fact that many elements enter into the formulation of an adequate program for measuring progress in reading. The selection of the tests to be used depends upon the objectives of reading, the forms of reading in which progress is to be measured, and upon the purposes of supervisors and teachers in giving the tests. Although there are many valuable tests now available, only three tests have been recommended for general use. These three tests, the Gray Oral Reading Scale, the Monroe Standardized Silent Reading Test, and the Thorndike-McCall Reading Scale, have been recommended because they have certain points of marked superiority and because each of them measures different elements of the reading process.

The chief purpose of giving tests is often that of measuring the work of the schools in a single city. In response to requests for a plan for such measurements, Gray prepared in 1916 a paper entitled, "Methods of Testing Reading."

This paper might well have been called a manual for testing, because it outlines in detail a plan for both formal and informal testing. The informal testing which Gray outlines as preliminary testing by classroom teachers, a plan which is here recommended, is designed to measure roughly the rates of reading and the ability to interpret and reproduce what is read.

The plan for this informal testing consists of setting aside one reading period each for oral and silent reading. In the period allotted to oral reading the pupils read as in regular lessons while the teacher marks in the book which she holds "(*a*) the particular part read by each pupil; (*b*) the point at which he began his reading; (*c*) the point which had been reached at the end of sixty seconds." Later, the rate of reading is computed for each pupil by counting the number of words which he read. This preliminary testing should continue until the teacher is confident that she can record the results accurately. The Gray Oral Reading Scale is then to be used for more exact measurement. Incidentally, much use can be made of the results of the preliminary tests in planning the work of individual pupils.

The preliminary testing of silent reading proceeds as follows:

"See to it that each pupil has a book, pencil, and sheet of paper at hand. Then give the following directions: 'Turn to page — (this page should immediately precede the one on which the test reading is to begin). Keep the book open at this page until you are given further directions. Presently I shall read a part of this page aloud. Each pupil should follow the reading carefully. When I read the last word on the page, turn to the next page and continue the reading silently. Be sure that you turn the page just as I read the last word. Continue reading as

rapidly as you can until the signal "Stop" is given. As soon as the signal has been given, close your books and write on your paper the line you were reading the instant the signal was given. Later I shall ask you questions about the story or I may ask you to write what you remember. Do you understand the directions?' Repeat the directions until you feel sure that each pupil does understand just what he is to do."[1]

Many teachers will prefer to test silent reading as just described except that they will either distribute to pupils or have on the blackboard questions based on what has been read, and ask the pupils to write answers to the questions with the reading passage before them. In this way dependence upon memory will be eliminated and, if questions have been skillfully devised, interpretation will be emphasized.

Although it is sometimes possible to have all testing done by a supervisor, it is more often desirable to have classroom teachers give tests. The three tests especially recommended can be given by the regular teachers after some practice in "preliminary informal testing" has been given. In order to have tests given as often as is necessary for adequate measurement, it is best to use a few tests and master the technique of administering them. For the lowest grades the Gray Oral Test is as good as any because it is based upon the reading processes which receive most emphasis during those years. Also, Gates found a fairly high correlation between the results of the Gray test and comprehension.

[1] Gray, W. S. Methods of Testing Reading, I. *Elementary School Journal*, XVI, 231–246. January, 1916.

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Note on obtaining samples of tests. Sample sets of reading tests can be obtained from the Public School Publishing Company, Bloomington, Illinois. Those especially recommended in the present chapter can be obtained for the following prices: Gray Standardized Oral Reading Tests, six cents; Monroe Standardized Silent Reading Tests, ten cents; and Thorndike-McCall Silent Reading Scale, thirty cents. An additional series of oral reading tests, Gray's New Standardized Oral Reading Check Tests, has recently been published by the same company. Each set of this series consists of five tests of equal difficulty. There are four graded sets for use in different grades. They are to be used for diagnosis of oral reading difficulties and for the measurement of progress from month to month. Standards for each grade have been determined. The price of a sample set of this series is fifty cents.

PART III

STANDARDS FOR EVALUATING MATERIALS FOR COURSES IN READING AND LITERATURE

CHAPTER XIII

THE FORMULATION OF STANDARDS FOR SELECTING AND ORGANIZING READING MATERIALS

How can the strength of a course of training be judged? The strength of a course of training can be judged by the results or products of the course. The results of a course of training depend upon three elements: the distribution of the benefits of the course; the equipment of the schools and teachers offering it; and the content of the course. In this chapter these three criteria are applied to courses of training in reading and literature. This examination of reading and literature is conducted in the light of the principles set forth in the preceding chapters of this book.

In judging the training offered in reading and literature courses, the first requisite is to know by whom its benefits are to be enjoyed and what those benefits are. This requisite necessitates knowledge of the objectives of the course, its real or alleged social worth, the interests and maturity of the persons pursuing it, and the possibility of coördinating pupils' equipment with their social needs. The second requisite is to know by whom and under what conditions the course is to be offered. This necessitates a knowledge of the teachers' equipment and the physical conditions which underlie the organization of courses.

The third requisite is to know the nature of the content of the course. This necessitates a consideration of the availability and organization of appropriate materials in connection with the interests and maturity of the pupils using them.

The practicability of these criteria is here maintained in spite of the fact that, in their application, they overlap one another slightly. It is believed, therefore, that a strong course of training is one which can successfully withstand critical evaluation by means of these basic criteria.

The interdependence of selection and organization. There was once a time when scholars attempted to master all knowledge. In that age of encyclopedism, selection was of relatively small importance; the main consideration was that of organizing materials in such a way that they could be speedily mastered. In contrast with that age is ours in which no one can master and keep abreast of any one of the major fields of knowledge. The educator's problem is now two-fold: he must select as well as organize what is to be learned.

Both the selection and organization of material for a course depend upon the amount of time the learner can spend upon the course. If, for example, one can spend only a few months upon a subject, say high-school mathematics, it is clear that one cannot master algebra, geometry, and trigonometry. A leading mathematical association of our country has advised, therefore, that instead of requiring a year of algebra of pupils who can spend only one year on high-school mathematics, the school reorganize its course so that these short-time pupils can at least acquaint themselves with all branches of high-school mathematics.[1] To

[1] *The Reorganization of Mathematics.* A report by the National Committee on Mathematical Requirements under the auspices of the Mathematical Association of America. 1923.

this end the association recommends a new selection and organization of material for Grades VII to IX. This plan necessitates a vastly different basis for selection from that emphasized when the conventional topics of algebra constitute the materials of the course. Likewise the content of the new course necessitates a complete reorganization of the selected material in order that the mathematical training shall be logical and at the same time adapted to the needs and interests of all pupils. The following tabular summary of conventional and reorganized mathematics illustrates sufficiently the changes proposed in both the content and organization of mathematics for Grades VII to IX.[1]

Grade	*Conventional Mathematics for the Junior High School*	*Reorganized Mathematics for the Junior High School*
VII.	Arithmetic	Applications of arithmetic, particularly in such lines as relate to the home, to thrift, and to the various school subjects; intuitive geometry
VIII.	Arithmetic	Algebra; applied arithmetic, particularly in such lines as relate to commercial, industrial, and social needs
IX.	Algebra	Algebra, trigonometry, demonstrative geometry

The case of mathematics has been cited as an illustration because it is so clear an example of the effect of new principles of selection upon the organization of a definite body of materials.

As for mathematics, so for reading and literature, the length of time available for study affects the selection of materials. If every pupil could spend twenty years on

[1] *The Reorganization of Mathematics*, p. 29.

literature, the problem would be simplified. Even then, however, careful selection would be necessary, for few students can keep pace with the growth of literature. This being the case, the school must select with care those materials which will best introduce children to the world's most important reading matter. Next, the school must organize this literature so that children's experiences with it will aid in the attainment of the two objectives of all education: the cultivation of adequate skills and the development of correct purposes.

The distribution of the benefits of the course in reading and literature. The school controls an essential part of the reading of children until they are sixteen years of age; it controls for a much longer time the reading of many pupils. The benefits of reading and literature are, therefore, universal when the school does its duty; for all population groups are represented in the school. It is, however, no easy task to distribute the benefits of a school course; it would be easy if all children were alert and had the advantages commonly provided by intelligent parents. The difficulty is that when the school attempts to distribute these benefits, it faces the problem of providing suitable training for the stolid pupils, the unfortunate children in whom dull parents have quite stifled childish interest in everything except passive obedience. These pupils with "broken wills" have been "trained to mind"; the teacher of reading may teach them to read, but the teacher of literature has a sorry time trying to rekindle in them the human flame, imagination. To make matters more difficult, alert pupils are placed in the same classes with the stolid, together with all the other varieties of childhood. The teacher is then expected to employ identical material in making the classroom experiences profitable to all pupils.

Temperamental differences are not the only variances present in the same class. The teacher is commonly confronted by pupils whose ages vary six or more years. The youngest of these pupils are likely to be the most alert and intelligent, as the oldest are likely to be the slowest and dullest. Indeed, it is found that usually the youngest pupils in a class are mentally the oldest. If, then, the pupils' mental ages are considered, the old are young and the young old.

Variety is thus found to be a characteristic trait of school classes. One might assume then that, since so many kinds of persons are represented, all kinds of literature would be welcomed by certain pupils. While this may be true, the school cannot afford to waste the time and at the same time deaden the interest of one group of pupils who are bored by what delights the other group. In so far as each pupil reads alone, he can properly satisfy his legitimate tastes by selecting his own materials, but in so far as the class works together the materials must be universal in their appeal. This point can, therefore, be stated as the first standard for selecting materials for reading: The material must appeal to all types of pupils.

Before continuing this discussion, it is necessary to enumerate the benefits which are expected from courses in reading and literature. These benefits are stated in general terms in Table LVI. A detailed discussion of these terms has been given in Chapter VII.

Conceivably certain materials may possess universal appeal, but at the same time be without value. A reading selection, in order to be worthy of consideration by the school, cannot be merely interesting. If that were the case, the legends of the comic paper and the Wild West stories of rangers and scouts would have immense advantages over more conventional materials. The difficulty with

TABLE LVI

The Benefits to be Derived from Courses in Reading and Literature

Cultivation of a vocabulary suitable for adult needs
Cultivation of economical habits of reading
Training in effective oral reading
Training in enjoyment of worth while literature
Training in grasping the content of what is read

such material is that it does not cultivate a vocabulary adequate for adult needs; it does not train in economical habits of selecting and organizing the gist of what is read; and it does not train for enjoyment of worth while literature. The objection to the use of such material for the training of economical habits is clearly implied in a statement made by a junior high-school pupil of Miss Shepherd's:[1] "Practice something that is a little hard for you." No one maintains that the content of this simple, proposed material would give adequate training in the grasping of the content of what is read; the reason is again the one just quoted from Miss Shepherd. Nor can oral reading be taught by such trivial material; instead, oral reading material must present situations which bring out varied responses, and not merely the waggish remarks of a jester, the ejaculations of an excited scout, or the melodramatic narrative of dare-devil exploits. Material for reading must, therefore, have not only a universal appeal to children; in addition to this appeal it must be of such a character as to provide some or all of the benefits catalogued in Table LVI. From this statement comes the second standard for selecting and organizing materials: Suitable material is that which is especially adapted to the

[1] Shepherd, E. Some Silent-Reading Lessons in Junior High-School English. *School Review*, XXIX, p. 208. February, 1921.

attainment of the benefits commonly agreed upon as legitimate.

Not only the selection but also the organization of material hinges upon the derivation of these benefits. That a careful grading of the materials is necessary with reference to mechanical difficulties, no one denies. The importance of grading with reference to interpretative difficulties seems to be less readily granted. Pupils are often asked to read many selections which are far beyond their comprehension. This extreme difficulty, due to poor organization, prevents the attainment of each of the five benefits of Table LVI. The development of a vocabulary is hindered because the practice material is too difficult. Economical habits of reading cannot be developed because the pupils are forced to analyze instead of read; and analysis does not cultivate adequately the fundamental processes of reading. Oral reading is rendered unintelligible because many pupils can neither pronounce the words nor understand the meaning of what they attempt to read. Training in enjoyment of worth while literature is worse than neglected; pupils are effectively driven from literature of the very sort in which the school attempts to interest them. This is due to the fact that their classroom experiences are unpleasant. It is then perfectly natural for them to avoid as carefully as possible the literature of classrooms for fear of a repetition of those experiences. Effective training in grasping the content of what is read cannot be given when the material of instruction is too difficult. The reasons are (1) that such materials do not grip the reader's attention; (2) that the amount of material covered is too small to provide ample practice; and (3) that the process of grasping the content is made subsidiary to the struggle with the mechanical difficulties presented. Wrong organization of worthy

literary material can thus interfere with the attainment of the benefits of reading and literature courses, while proper organization of the same worthy material fosters such attainment. A third standard of judgment can now be stated: Worthy material for reading must be graded so as to be within the grasp of the pupils for whom it is intended.

Are the benefits described in the foregoing pages attainable by all pupils or are they restricted to certain groups? This question can be answered in two ways. First, pupils might if they remained in school long enough be expected to attain all the benefits of all the courses which they pursued. Second, it may be that only certain apt pupils can attain such benefits as those here set up. The question thus suggests two additional questions: Are the benefits attainable within the years of compulsory school attendance? and, Are the benefits within the mental grasp of all normal pupils? Only a superficial study of the benefits is needed to convince one that all of these are attainable in part if not in full by all normal children within the period of compulsory school attendance. Before more definite answers can be given to these questions a canvass of the objectives of each grade of a well-organized course must be made.

An excellent example of such organization together with a statement of the objectives for each grade is found in the formulation of attainments for the schools of Rochester, N. Y.[1] This excellent formulation begins with a general outline of the objectives of the course in reading. The outline of objectives is followed by a statement in terms of the objectives of the activities to be carried on each year. The outline of objectives is as follows:

[1] *Attainments in Reading.* Copies are obtainable from Mr. J. P. O'Hern, Assistant Superintendent of Schools, at twelve cents each, postpaid.

"Objectives in Reading

"I. Permanent Interests in Reading
- *A.* Books of Real Worth
  1. Fiction
  2. Poetry
  3. Science
     - *a.* Nature
     - *b.* Health
     - *c.* Invention
  4. Humor
  5. Bible Stories
  6. Travel
  7. Biography
  8. History
  9. Letters and Diaries
  10. Art
     - *a.* Music
     - *b.* Pictures
     - *c.* Sculpture
- *B.* Current Events
  1. Newspapers
  2. Magazines

"II. Economical and Effective Study Habits
- *A.* Recognition of Need for Study
  1. Determine Definite Objective
  2. Define Problem
- *B.* Consideration of Informational Sources
  1. Review Familar Data
  2. Locate New Data
- *C.* Organization of Material
  1. Interpret
  2. Analyze
  3. Evaluate
  4. Summarize
  5. Reproduce

"III. Economical and Effective Use of Books
- *A.* Familiarity with Mechanical Features
  1. Title Page
  2. Preface
  3. Table of Contents
  4. Index
  5. Chapter and Paragraph Headings
  6. Marginal and Foot Notes
  7. Cross References
  8. Illustrative Material
  9. Glossary
- *B.* Familiarity with Reference Material
  1. Library Indices
  2. Card Catalogues
  3. Encyclopedias
  4. Dictionaries

"IV. Mastery of the Mechanics of Reading
- *A.* Silent Reading
  1. Comprehension
  2. Rate
- *B.* Oral Reading
  1. Fluency
  2. Vocabulary Development
     - *a.* Phonetic Analysis
     - *b.* Pronunciation
     - *c.* Enunciation"

The following activities for Grade IV illustrate the types of accomplishment to be adapted by teachers to the varying conditions of each school:

"I. Permanent Interests in Reading.
1. Interest children in good literature by having teacher or child read a chapter or two of some good book and then give the members of the class an opportunity to finish the book independently.

2. Introduce children to various types of reading such as hero stories, Bible stories, travel, history, fiction, and humorous stories. Call attention to authors, illustrators, etc.
3. Arouse interest in the reading of poetry by reading aloud to class best literary selections. Follow this by discussion.
4. Give definite suggestions and help in regard to reading material, especially for children who are not interested in outside reading. (The List of Books for Recreational Reading will be found helpful in this connection.)
5. Encourage children to bring copies of their books and magazines, such as *St. Nicholas* and *Red Cross Magazine*, to be read and enjoyed by the whole group before opening of session or when work is finished.
6. Read additional material for content in connection with projects.
7. Encourage children to draw books from public library for project reading.
8. Encourage reading aloud to parents and friends.
9. Encourage much silent reading at home for pleasure.
10. Keep in touch with what children are reading, through class discussions of interesting books which pupils have read.
11. Discuss in a very simple way current events. Have pupils bring to the class clippings from newspapers and magazines on various topics.
12. To increase interest in current events, make a scrap book of clippings and pictures from newspapers and magazines.

"II. Economical and Effective Study Habits.

A. Reading for Study.

1. *Find central idea* — in paragraphs and short selections in which points are fairly evident.

2. *Discover problems for study and investigation* — in connection with material which is closely related to interesting problems for study. Teacher asks questions.
3. *Find a series of closely related points* — in short selections in which the points are fairly evident. Teacher writes points on board as they are selected.
4. *Determine the relative importance of statements* — in regular reading material. Teacher directs discussions to proper conclusions, laying foundation for independent judgments.
5. *Find answers to thought-provoking questions which are asked by pupils or teacher* — in relatively easy, assigned passages. Answers derived directly from content. Be sure that the answer given answers the question correctly.
6. *Select facts which relate to a problem under discussion* — in relatively easy assigned passages. Problems suggested by pupils or assigned by teacher. Pupils search for facts which bear directly on problem. Each pupil recognizes why discussions are good or poor.
7. *Draw valid conclusions from material read* — in relatively simple selections. Problems assigned by teacher. Reasons for conclusions carefully explained.
8. *Judge the validity of statements* — in material which presents statements the validity of which might be questioned. Teacher should challenge and recall statements or experiences which are at variance with those read. This lays foundation for a critical attitude.
9. *Train in keen critical interpretations* — of simple material in which interpretations are based on pupils' experiences, previous reading, on mean-

ings derived from a study of the context, the dictionary, or notes and explanations in the books used by the pupils. Teacher directs and supervises closely.

10. Lead children to observe accurately and listen attentively.
11. Have children follow accurately either printed or written directions.
12. Lead children to find descriptions.
13. Develop the habit of finding simple quotations.
14. Have the children find the part of the selection which gives most knowledge of a certain character.
15. Lead children to judge certain characters in a story giving reasons for their judgments.
16. Have children find elements of time and place in selections.

NOTE: — Continue work as suggested for Third Grade.

B. Reading for Recreation or Enjoyment.

1. *Find the author's aim or purpose*— in short selections in which the author's purpose is fairly evident. Discussions initiated by the teacher.
2. *Associate material read with previous experience* — in selections containing much material related to pupils' immediate experiences. Pupils are encouraged to report their experiences.
3. *Find answers to thought-provoking questions which are asked by pupils or teacher* — in relatively easy assigned passages. Answers derived directly from content.
4. *Remember and reproduce* — short selections containing narrative and descriptive material.
5. *Dramatize informally short stories* — sometimes teacher takes charge and at other times children take entire charge.

6. Have children compare characters in stories to those in life. Have them select chief characters and minor characters.
7. Have children select appropriate titles for a story or for various parts of a story.
8. Lead children to find everything said by one person throughout the story, also questions asked.
9. Lead children to find descriptions.
10. Have children find the part of the selection which gives most knowledge of a certain character.

"III. Economical and Effective Use of Books.

1. In addition to points suggested in the Third Grade, give instruction in the use of chapter headings and glossary. Develop skill in finding titles in table of contents. Teach these points only in the simplest form.
2. Continue training in the care of books and finding pages quickly.
3. Give instruction in the use of several books to secure information on a given problem.
4. Give training in the economical and effective use of the dictionary.
5. Have children make original stories about pictures and combine into a booklet. These stories may be read to the class or to another grade.
6. Arrange with librarian for class to visit Public Library where librarian will explain use of card index, etc.

"IV. Mastery of the Mechanics of Reading.

A. Silent Reading

1. Have at least half of the reading, silent reading.
2. Devote at least two-fifths of the time for reading during the week to reading for study (*i.e.*,

intensive type, basic material) and three-fifths to reading for pleasure (*i.e.*, extensive type, supplementary reading).

3. Encourage either oral or silent reading merely for pleasure.
4. Give opportunity for quantitative silent reading with special instruction in the art of effective silent reading.
5. As children read a selection silently, suggest that they list the words they do not know. From these, teacher makes general list.
6. Allow children to read interesting, easy story for short period. Rhythmical sweeps, with few fixations will thus be secured.
7. Encourage pupils to reread simple, familiar material. Place a time limit and see how many pupils approach the standard time limit for the grade.
8. Have silent reading on projects in connection with history, geography, etc.
9. Have children write questions on selection which has been read. Other members of the class read the questions silently and answer them orally.
10. Give speed drills in reading for thought. Borrow supplementary readers from lower grades.
11. Give informal or standardized tests, for comprehension and rate and to locate individual difficulties. Give the class standards to be attained and allow pupils to keep their own scores or keep chart for the class so that pupils may know their progress.

B. Oral Reading

1. Motivation should be a large factor in oral reading.
2. Provide audience situations for oral reading.

Occasionally require a summary of what has been read to the class by individual pupils.

3. Provide opportunity for socialized recitations in oral reading.
4. Review phonetic rules and principles, continuing work with polysyllabic words, with opportunity provided for application. Give attention to syllabication and accent.
5. Drill on word analysis for content and pronunciation.
6. Begin in this grade a systematic study of the dictionary. Drill on alphabetic arrangement of words having the same initial letter. (See Course of Study in English.) Emphasize purpose of words in heavy type at top of page.
7. Develop habit of consulting dictionary for pronunciation and meaning of unfamiliar words. Show value of diacritical marks in this connection.
8. Lead children to determine meaning of unfamiliar words from context.
9. Write word groups and sentences on the board, one shown at a time. After short exposure have children reproduce.
10. To increase rate, teacher asks for certain word groups which the children find rapidly; then one child reads the entire sentence orally.
11. Give drills for correct use of unfamiliar words found in context. Simple exercises may be planned by having sentences previously written on the board in which synonyms are used. After drill on meaning of unfamiliar words, permit children to see sentences for the first time and substitute new word for synonym."

In the preceding pages much has been said and implied about pupils' equipment for reading and also their social

needs. The Rochester plan of organization has been quoted to show how pupils' equipment and social needs can be coördinated. From this example and discussion two more standards for the selection and organization are derived: The material for the course in reading must be so organized that certain demonstrable benefits are attainable by all pupils each year of the course; and, The material for reading should be so organized that a constant coördination of pupils' equipment and social needs is maintained.

By whom and under what conditions training in reading and literature is offered. The teacher's equipment. How much intelligence must a teacher possess? This is a piquant question which Bliss attempts to answer in a recent magazine article.[1] He finds that in county normal schools students of abilities ranging from poor to superior are preparing to teach. Of 743 students tested in 1920–1921, a total of 77 were selected so that each of the five groups of ability were represented as follows: superior, excellent, good, fair, and poor. These 77 students who became teachers the following year were rated by their superintendents and the ratings reported to the investigator. The results "show that the chances are twice as good to have superior or excellent teachers if individuals of superior quality are employed, as when individuals of average ability are employed, and almost four-and-a-half times as good as when individuals of low rank mentally are hired. They show further that there is only one chance in ten of an individual of superior ability doing work that is as low as fair or poor, but that there is one chance in four that average individuals will do grades of work this low."

In connection with general mental ability the elements of personality which are desirable in a teacher may also

[1] Bliss, W. B. How Much Mental Ability Does a Teacher Need? *Journal of Educational Research*, VI, 33–41. June, 1922.

be considered. What these elements must be if teachers are to succeed has been investigated from different points of view. The causes of failure have been reported as follows: poor discipline, weak personality, deficient scholarship, lack of teaching skill, and lack of interest in teaching. These causes of failure are cited because the teachers who are suffering from any of them can be improved if not cured of their distempers. The best remedies known for teachers of reading and literature have already been described in Chapter X in discussing the relation between classroom teaching and the organization of content. When a teacher prepares himself in the ways there described, he seldom fails to become interested in teaching, to improve in scholarship, and to develop a stronger personality. As a result, increased skill in teaching and greater control over pupils follow.

The desirable traits of teachers have been canvassed by obtaining pupils' estimates of their teachers. Most prominent among these traits are kindness, fairness, firmness, sense of humor, patience, power to encourage, and clearness of explanation. This list of traits as well as the list commonly given in rating scales emphasizes the teacher's qualities rather than the results of her teaching. While these traits are desirable, the ultimate test of a teacher is found in the products of her work.

In order to emphasize the results of teaching and at the same time objectify the standards for judging teachers, Superintendent Connor and his teachers formulated a teacher rating plan in which seven "standards" of judgments are defined.[1] These standards which have the advantage of being both attainable and objective are stated in terms of activities which are to be carried on by pupils.

[1] Connor, W. L. A New Method for Rating Teachers. *Journal of Educational Research*, I, 338–358. May, 1920.

Since these are desirable activities, it is assumed that teachers may be rated as good or poor according to their success or failure in setting up these activities. The standards are as follows:

1. *Thinking.* — Thinking by pupils in study or recitation, of the quality or amount agreed upon and established by the course of study or other practical standards.

2. *Emotional reaction.* — Appreciation resulting in immediate pleasure, and emotion leading to some definite activity which has individual and social value.

3. *Knowledge and skill.* — Such classroom evidences of knowledge and skill as established by the course of study and the norms of attainment of standard tests.

4. *Morale in the dispatch of work.* — Evidences of a confident, courageous, loyal, self-reliant, prompt, and persistent spirit of pupils as they work.

5. *Initiative in socially significant situations.* — Pupils proposing or choosing, organizing, and conducting work which furthers the educative purposes of the school groups.

6. *Ethical self-control in situations which are socially significant.* — Restraint in the classroom and other group units of the school from conduct which would interfere with the educative activity of the school.

7. *Deportment.* — Easy, natural, gracious, and courteous use of correct form in the performance of school duties and other activities.

According to these standards, a superior teacher of reading is one whose pupils show clear evidences of (1) individual thinking, (2) desirable emotional reactions toward what they read, (3) the ability to attain the grade standards or better in standard reading tests, (4) morale in carrying on their work, (5) initiative in choosing and carrying forward their work in reading, and (6) and (7) self-control and good deportment in the classroom. With these

definitions of a superior teacher in mind, another standard for judging a course in reading can be set up: A strong course of training in reading is one which is offered by a teacher whose superiority is evidenced by the desirable activities of his pupils.

An important aspect of the teacher's equipment is implied but not directly stated in connection with the foregoing standard for rating teachers. This aspect has been well treated by Leonard. "It appears, first of all," says Leonard, "that a clear majority of almost any group of college students — including college graduates — who are themselves teachers of English in the grades and even in the high schools, display little real first-hand familiarity with such masterpieces as the stories of Homer and the Old Testament narratives in our best English translations." [1] Professor Leonard finds these students not only unacquainted with classical masterpieces and with early modern works, but also unacquainted with even the names of many important modern writers. For example, Robinson, the poet, is almost unknown to American high-school teachers. In contrast with this lack of knowledge about the masters is the "regard, admitted without shame by a clear majority for such syrups and morbidities as those of Myrtle Reed's novels and for Mr. Dixon's and Mr. Robert Chamber's even more pernicious works." [2]

Of course, no one claims that all teachers have thus neglected their birthrights. Yet, as Professor Leonard remarks, the witnesses whom he examined are all from the upper quarter of the teaching body who are graduates of colleges. Again, no one claims that teachers should be able to pass a uniform test upon all worth while literature.

[1] S. A. Leonard. *Essential Principles of Teaching Reading and Literature.* Lippincott, 1922. Pp. 51–52.
[2] Leonard, *op. cit.*, p. 53.

Still, one may expect teachers to have at least a fair acquaintance with such writers as Howells, Galsworthy, Wharton, and Hardy. This acquaintance is essential for high-school teachers if they expect to point the way to good modern literature. No doubt there is ample reason for a teacher's being thoroughly acquainted with the lighter and more popular literature of the day. This acquaintance is essential if the teacher expects to meet the pupils upon their own ground. It is here maintained that the teacher must again employ one of the salesman's methods; that is, just as the successful salesman familiarizes himself with his prospective customer's interests, so must the teacher become familiar with the literary interests of boys and girls. The difficulty at the present time is that teachers themselves have been so enamoured of the lesser writers that they have failed to see the greater glories of the superior writers.

Elementary-school teachers have had little attention in the preceding paragraphs. Lest this neglect become too prolonged, it is suggested that grade teachers examine themselves upon the following authors: Kenneth Grahame, Barrie, Maeterlinck, Pyle, Burnett, Asbjörnsen, and Thompson-Seton.[1] The standards here implied for teachers' equipment are proposed with full knowledge of their difficulty. All that can be said is this: There is no royal road to adequate equipment for teachers. Teachers must know how to read and they must know much of the best literature. Fortunately, these two branches of knowledge can be supplied in part after one enters upon his teaching career; but teachers can hardly find excuse for continued unfamiliarity with their own field. As a standard of equipment it may be maintained that a well-equipped teacher of reading and literature is one who has a passing acquaint-

[1] These names are selected from Professor Leonard's excellent and extensive bibliography of children's literature. *Op. cit.*, pp. 370–437.

ance with many of the lesser writers and more than a passing acquaintance with much of the world's finest literature.

By whom and under what conditions training in reading and literature is offered. The physical conditions of reading. In Chapter V can be found a detailed discussion of the organization of the physical conditions of reading. According to that chapter, the physical conditions of classroom and library reading must be so organized that the places in which books are to be read will be attractive and accessible, the mechanics of finding and using books must be familiar to children, and the books themselves must be attractive. From that discussion is derived the following standard: The physical conditions of reading must contribute to the attractiveness and accessibility of books and other reading materials.

The nature of the content of reading and literature courses. ***a*. The availability of appropriate material.** At the present time literary material is published at a rate so rapid that no person can hope to read the entire output. Of this mass of material only certain parts are of sufficient social worth to warrant their use in the schools. These parts are written especially for young readers and appear in the various magazines and books which commonly help to adorn children's playrooms.

Some of the material which has been written for children has all the marks of articles which are " made to sell " — the content is valueless, its presentation crude, and its physical appearance most inartistic. Little of this sort of material enters the school or library. In contrast with this undesirable material is the material which is written by competent and sincere writers and illuminated by artists — its content is worthy, its presentation effective, and its physical appearance artistic.

Plentiful as the supply of worthy literature for children appears to be as one looks upon the fine sets of supplementary readers, the well-stocked libraries, and the magazines, there is, nevertheless, a dearth of certain forms of literature. Certain realms of literary endeavor have gone almost unexplored. Clearly, it has been assumed by many of the most prolific writers that children are interested only in fantastic tales. Within recent years folk tales from all peoples have also been brought into use in the lower grades. The emphasis upon these fictitious materials probably arose from the indisputable fact that children have been delighted by such tales as *The Three Bears*, *The Gingerbread Boy*, and *The Billy Goats Gruff*. There are, it is true, relatively few actual events that lend themselves so well to the story-teller's art as the exploits of Goldilocks; perhaps, few appropriate tales drawn from real life could be made so replete with surprise, adventure, and child life.

There are, however, certain notable exceptions. For example, the story of *George Washington and His Colt* has delighted children whenever it has been presented to them. There are, however, two difficulties in the provision of such selections: first, there are few available selections which are true, and, second, many factual selections are too difficult to use below the third grade. If, as a test of this statement, one examines the list of superior selections on pp. 138–140, one finds several selections which are either realistic, that is, possible, or factual. For example, *The Little Steam Engine*, *The Little Plant*, and *How Patty Gave Thanks* can be so classified. In examining the list of superior selections as a whole one is impressed, however, less by the presence of realistic or factual selections than by their absence. And this condition exists notwithstanding the undoubted value of factual content for reading and the present-day neglect of the reading of such material!

This scarcity of certain types of superior reading material when contrasted with the abundance of certain other types leads one to suspect that the materials of reading have been selected upon an inadequate basis. It will be recalled that the list of superior selections just referred to is, with the exception of four selections, composed of selections found in present-day readers.[1] Upon what bases have the superior selections been chosen and incorporated into readers? This question has been answered by authors and compilers of readers and by teachers and pupils. The answer is that selections have been chosen upon the following bases: suitability for a given grade, interest to children, literary merit, and instructional value. Criticism will be made here, not of these bases themselves but of the relative emphasis upon the different bases and of the notions of what constitutes instructional value.

The term, instructional value of reading selections, has had several different definitions during the last century. Chapter III discusses this matter and supplies illustrations to show how the different definitions have influenced the content of readers. The term, instructional value, has recently undergone another change so that it now includes the three general objectives discussed in Chapter VIII. As stated on page 41, silent reading is now conceived of as a means for developing the technique of reading. Since the technique of reading can be developed only by drill, and since drill solely upon literary material is profitable neither to the child nor to the literary material itself, a freer use of factual selections is to be defended. Consequently, the bases stated in the preceding paragraph require a new interpretation. Although *standard* reading selections when chosen for courses of study had best be

[1] The four selections not in readers are *Before Coins Were Made*, *The Minting of Coins*, *Paper Money*, and *Money in the Home and the Community*.

selected upon the basis of appeal to children's interests, the training of pupils for efficient silent reading requires that *new* materials be added to those now in general use, and that the new materials be selected with certain instructional values clearly in mind. The objection made elsewhere that certain "didactic" qualities should be disregarded in choosing from standard materials[1] cannot be interpreted as forbidding emphasis upon the instructional values here under discussion. These instructional values have already been found to be broad enough to admit of the use of selections which are at the same time suitable for use in drill upon technique and for meeting children's interests.[2]

In the past the choice of material was governed by values which led either to a narrow formalizing of materials or else to such unskillful use of a broad range of materials that the purposes were not achieved. At the present time, instructional values are attained by specific treatments of many forms of material; therefore, all materials which lend themselves to drill upon speed, comprehension, organization, and reproduction are employed with one or more of these objectives in view.

Consequently, the availability of appropriate reading matter must be measured not by the size and number of textbooks in reading and literature, but by new standards. That is, material for teaching reading should be selected for its value in drilling upon speed, comprehension, organization, and reproduction. Furthermore, only those books and selections which are worthy in content and literary style can be chosen for use in either reading or literature.

[1] Uhl, W. L. *Scientific Determination of the Content of the Elementary School Course in Reading.* University of Wisconsin, 1921. P. 46.

[2] Uhl, *op. cit.*, Chapter VII and especially pp. 97 ff.

b. **Difficulties and possibilities of utilizing content for instructional purposes.** The discussion of the availability of appropriate material for reading and literature called attention to the failure of courses in reading as now organized to lay sufficient emphasis upon realistic and factual elements. Teachers who are still employing materials compiled before the recent investigations of reading are certain to meet great difficulties in attempting to achieve the objectives which are now commonly accepted. The reason is plain: the older courses over-emphasized the purpose of presenting literature to children in connection with the provision of general training in reading. It is now recognized, however, that the essential purpose of a reading course is not the presentation of literature, and that children require specific forms of training heretofore neglected.

The substitution of new objectives for old does not, of course, render all older materials worthless. The teaching of reading is difficult, however, unless teachers employ well-written, worth while materials designed for specific purposes. If, for example, a teacher uses a reader whose content is made up of such selections as *The Village Blacksmith*, *Alice's Adventures in Wonderland*, and *The Snow Image*, the planning of speed drills is difficult. Let it be assumed, for example, that *The Village Blacksmith* is to be used for drill purposes; then the teacher may place on the blackboard certain points about which the pupils are required to find information as quickly as possible. Or, the teacher may require the pupils to organize the main points of the poem as quickly as possible in order to reproduce them. Still another form of drill that may be employed is that of timing the pupils as they read the successive stanzas; this may be followed by a repetition of the poem to see how much faster it can be read a second

time than it was the first time. All these suggestions probably seem as inappropriate to the readers of this book as they do to the writer. The difficulty lies in the fact that such selections as *The Village Blacksmith* are not suitable for these kinds of silent reading drills. This is by no means equivalent to saying either that the selection is undesirable for use in a reading course or that the suggestions made cover the whole range of possibilities in silent reading. What the illustration is intended to show is that the teacher who attempts to teach reading by the use of fine literature is deprived of the use of many important specific methods of teaching.

In advocating the use of factual content for purposes of training in technique, one must not lose sight of the fact that imaginative and poetic selections are also valuable. The use of *The Village Blacksmith* can lead to very important results if appropriate methods are employed. For example, after the poem has been suitably introduced, the children may be asked to read the stanzas and get as clearly as they can the pictures presented. Or, they may be asked to think of similar experiences in their own lives. Such use of the poem, whether the reading is conducted silently or orally, is entirely worthy and gives practice in a valuable kind of reading. These last suggestions serve to call the attention to another difficulty that is often encountered when literary selections are read by children. This difficulty is one of method, and appears to arise from the belief that although literary appreciation is desirable it is insufficient. Consequently, most readers are equipped with teaching devices or " aids " as they are erroneously called. These " aids " require the pupils to state where the poet was born; sometimes the " aids " require the pupils also to write a short story of Mr. Longfellow's life. These items cared for, the real task begins; then the pupils are

required to familiarize themselves with the words which may cause difficulty. One list of words provides drill upon *Bowdoin* (Longfellow's *alma mater*), *smithy*, *sinewy*, *brawny*, etc. It should be recorded here that *The Village Blacksmith* is one of the few selections which withstand the attacks of editors and teachers. Even after as well as before such onslaughts the poem interests children — many literary selections succumb when thus attacked.

This discussion of difficulties and possibilities, together with the discussions in the preceding chapters, emphasizes the need for these standards for selecting and organizing reading courses: The reading course should contain a miscellany of materials representative of the many kinds of reading required in academic and adult life; also, the different kinds of materials should be utilized in different ways according to the demands of the materials themselves and the different purposes for which they are employed.

Summary. This chapter has developed a number of standards for the selection and organization of reading materials. The standards are restated in the remaining pages of the chapter, and, for convenience are divided into two groups: those which should control selection, and those which should control organization.

a. **Standards for selecting reading materials.** The school must select with care the materials which will introduce children to the world's most important reading matter.

The material of the course must appeal to all types of pupils.

Suitable material is that which is especially adapted to the attainment of the benefits commonly agreed upon as legitimate.

Material for teaching reading should be selected for its value in drilling upon speed, comprehension, organization, and reproduction.

Only those books and selections which are worthy in content and literary style can be chosen for use in either reading or literary courses.

The reading course should contain a miscellany of materials representative of the many kinds of reading required in academic and adult life.

b. **Standards for organizing reading materials.** The school must organize its instructional material so that children's experiences with it will aid in the attainment of the two objectives of all education: the cultivation of adequate skills and the development of correct purposes.

Worthy material for reading must be graded so as to be within the grasp of the pupils for whom it is intended.

The material of the course in reading must be so organized that certain demonstrable benefits are attainable by all pupils each year of the course.

The material for reading should be so organized that a constant coördination of pupils' equipment and social needs is maintained throughout the course.

A strong course of training in reading is one which is offered by a teacher whose superiority is evidenced by the desirable activities of his pupils.

A well-equipped teacher of reading and literature is one who has a passing acquaintance with the lesser writers and more than a passing acquaintance with much of the world's finest literature.

The physical conditions of reading must contribute to the attractiveness and accessibility of books and other reading materials.

The different kinds of materials should be utilized in different ways according to the demands of the materials themselves and the different purposes for which they are employed.

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CHAPTER XIV

THE APPLICATION OF STANDARDS FOR SELECTING AND ORGANIZING READING MATERIALS

The standards for the selection and organization of reading materials as formulated in Chapter XIII were developed from and accompanied by a discussion of considerable length. It is now necessary to rearrange them in tabular form in order to make them practicable. The purpose of this chapter is, therefore, to show specifically how each of the standards can be applied.

The first step toward the application consists of reducing the number of standards by combining certain ones which overlap others. In thus combining and restating the standards, the desirability of using them when evaluating either a single reading book or an entire course has been considered. As thus combined these standards form the basis for the following plan for evaluating reading materials.

The fact that all the standards have been derived from carefully conducted statistical and experimental studies gives them great weight. The advantage of using such a plan as the following is that it requires a consideration of each of the important features of reading materials. Sufficient investigation of reading has already been made to warrant the assertion that the quality of reading material and its organization will for at least the next decade be judged by these standards. No single standard is sufficient to guide in the adoption of a book or series of books. Instead, proposed material must be superior from all these points of view.

Brief Outline of the Plan for Evaluating Reading Materials

1. Provisions for training pupils to read the various types of important reading matter
2. Provisions for the interests of different pupils
3. Provisions for the development of the techniques of reading
4. Provisions for interests through which the level of pupils' reading can be raised
5. The grading of the material
6. Provisions for the vocabulary needs of pupils
7. Provisions for interests through which the level of pupils' social life can be raised
8. Provisions for aiding teachers in the use of the material
9. The physical make-up of the book or books under consideration
10. Summary of judgments

1. Provisions for Training Pupils to Read Various Types of Important Reading Matter

a. State the number of pages devoted to each type.

Types of Readings Represented	Grades or Books													Total Pages	Per Cent of Total Pages
	1A	1B	2	3	4	5	6	7	8	9	10	11	12		
Biography, Letters															
History															
Travel															
Inventions, Discoveries															
Science, Biology, etc.															
Nature Observings															
Community Life															
Social Science															
Health															
Practical Arts															
Industry															
Commerce															
Thrift															
Directions for Work or Play															
Newspaper															

Types of Readings Represented	Grades or Books													Total Pages	Per Cent of Total Pages
	1 A	1 B	2	3	4	5	6	7	8	9	10	11	12		
Art															
Drama															
Fiction															
Mythology															
Fable															
Poetry															

b. Is the material old or new? State the number of pages which are devoted to new or old materials.

	Grades or Books													Total Pages	Per Cent of Total Pages
	1 A	1 B	2	3	4	5	6	7	8	9	10	11	12		
Amount of new material															
Material found in other books															
Improved versions of old materials . . .															

c. Is insufficient provision made for any type or types of important reading matter? Yes ——. No ——.

If so, cite the type or types and make recommendation as to desirable additions.

d. Is too much space devoted to any type or types of important reading matter? Yes ——. No ——.

If so, cite the type or types and make recommendation as to desirable reductions.

2. Provisions for the Interests of Different Pupils

a. Are certain parts of the reading material more interesting to boys than to girls? Yes ——. No ——.

If so, cite pages and titles of selections.

b. Are certain parts of the reading material more interesting to girls than to boys? Yes ——. No ——.

If so, cite pages and titles of selections.

c. Are certain parts of the reading material especially interesting to pupils with strong literary inclinations? Yes ——. No ——.

If so, cite pages and titles of selections.

d. Are certain parts of the reading material especially interesting to pupils who are commonly uninterested in books?

Yes ——. No ——.

If so, cite pages and titles of selections.

e. Are certain parts of the reading material especially adapted to local interests of pupils? Yes ——. No ——.

If so, cite pages and titles of selections.

f. Are certain parts of the reading material especially adapted to the interests of foreign-born pupils? Yes ——. No ——.

If so, cite pages and titles of selections.

g. Are certain parts of the reading material especially adapted to the interests of rural school pupils? Yes ——. No ——.

If so, cite pages and titles of selections.

h. Are certain parts of the reading material especially adapted to the interests of city school pupils? Yes ——. No ——.

If so, cite pages and titles of selections.

i. Are certain parts of the reading material especially adapted to the interests of other types or groups of pupils? Yes ——. No ——.

If so, name the type or group and cite pages and titles of selections.

3. Provisions for the Development of the Techniques of Reading

a. Check the grade or grades in which adequate provisions are made for the development of the following techniques of reading.

	Grades												
	1A	1B	2	3	4	5	6	7	8	9	10	11	12
(1) Silent-Reading Techniques													
Rapid reading													
Accurate reading													
Comprehension of meaning													
Organization													
Reproduction of ideas													
Vocabulary control													
Reading with directions													
Reading without directions													
Reading with definite purpose													
Reading without definite purpose													
Reading to obtain directions													
Reading to get main outline													

3. Provisions for the Development of the Techniques of Reading — *Continued*

	Grades												
	1A	1B	2	3	4	5	6	7	8	9	10	11	12
Reading to get central ideas													
Reading to originate points													
Reading to get information													
Reading to obtain emotional reaction . . .													
Reading to collect data for answering questions .													
Reading to collect data for problem-solving . . .													
Reading to collect data for reorganization . . .													
Reading for critical evaluation													
(2) Oral-Reading Techniques Word recognition . . .													
Vocabulary control . .													
Attack upon new words .													
Expressive, interpretative reading													

3. PROVISIONS FOR THE DEVELOPMENT OF THE TECHNIQUES OF READING — *Continued*

b. Place a check in the appropriate column to indicate the quality of the provisions for the development of the techniques of reading.

	Excellent	Good	Fair	Unsatisfactory
(1) Silent-Reading Techniques				
Rapid reading				
Accurate reading				
Comprehension of meaning				
Organization				
Reproduction of ideas				
Vocabulary control				
Reading with directions				
Reading without directions				
Reading with definite purpose				
Reading without definite purpose				
Reading to obtain directions				
Reading to get main outline				
Reading to get central ideas				
Reading to originate points				
Reading to get information				
Reading to obtain emotional reaction				
Reading to collect data for answering questions				
Reading to collect data for problem solving				
Reading to collect data for reorganization				
Reading for critical evaluation				
(2) Oral-Reading Techniques				
Word recognition				
Vocabulary control				
Attack upon new words				
Expressive, interpretative reading				

c. Summary of the judgments upon the provisions for the development of the techniques of reading.

(1) Is adequate provision made for the development of all the techniques of reading? Yes ——. No ——.

If not, cite the technique or techniques for which there is inadequate provision and make recommendations.

(2) Is the quality of provisions for the development of the techniques of reading distinctly superior? Yes ——. No ——.

If not, cite the technique or techniques for which the provisions are not superior and make recommendations.

4. Provisions for Interests through Which the Level of Pupils' Reading Can Be Raised

a. State the number of pages that exemplify each of the following qualities.

	Grades or Books													Total Pages	Per Cent of Total Pages
	1A	1B	2	3	4	5	6	7	8	9	10	11	12		
Joy-creating Qualities															
Interesting action															
Dramatic or exciting															
Non-dramatic															
Interesting characters															
Interesting problems															
Interesting repetition															
Within or similar to pupils' experience															
Animal play or animal life															
Personification															
Fairy or supernatural															
Festival															
Humor															
Literary Qualities															
Factual															
Fanciful															
Realistic															
Consistent															
Dramatization, available for Rhyme and Rhythm															

b. Is the material sufficiently varied in content and style?
Yes——. No ——.

Cite passages in support of your judgment.

c. Is the material characterized by excellence of diction?
Yes ——. No ——.

Cite or quote passages in support of your judgment.

d. Is the material representative of the best teaching content? Yes ——. No ——.

Cite titles, authors, or passages in support of your judgment. (It is to be understood that excellent material for the teaching of reading techniques *may* not be representative of the world's best literature. Consequently, the judgments as to content will vary according to whether reading or literature courses are being judged.)

5. The Grading of the Material

The following selections are graded as to difficulty on the basis of pupils' and teachers' judgments.* Examine the list and compare it with the material under consideration. Record your judgment in the blanks following this list of selections.

Reading Selections Graded as to Difficulty

	Easy	Moderately difficult	Difficult	Too difficult
Grade I	The Little Red Hen	The Caterpillar	Aladdin and His Wonderful Lamp	The Sleeping Beauty
	The Three Bears	The Clever Jackal	I Saw a Ship a-Sailing	Dick Whittington and His Cat
	What Does Little Birdie Say?	The Swing	The Little Plant	
Grade II	The Bremen Band	The Ugly Duckling	The Bell of Atri	Phaëthon
	Cinderella	The Golden Touch	Robinson Crusoe	Sweet and Low
	Little Red Riding Hood	The Sleeping Beauty	East o' the Sun and West o' the Moon	The Village Blacksmith
Grade III	The Hero of Haarlem	The Bell of Atri	Phaëthon	The Czar and the Angel
	The Tar Baby	The Wind and the Moon	Sindbad th Sailor	The Crow
	The Elves and he Shoemaker	The Wishing Gate	The Wreck of the Hesperus	The Sandpiper
Grade IV	Dick Whittington and His Cat	Florinda	A Child's Dream of a Star	The Barefoot Boy
	Knights of the Silver Shield	The Nurnberg Stove	Darius Green	Excelsior
	The Little Post Boy	The Pied Piper	The Last Lesson in French	The Snow Image
Grade V	The Nurnberg Stove	Christmas at the Cratchits'	The Barefoot Boy	Abou Ben Adhem
	Phaëthon	Out to Old Aunt Mary's	How They Brought the Good News	The Great Stone Face
	The Pied Piper	The Village Blacksmith	Rip Van Winkle	Paul Revere's Ride

Grade VI	The Bell of Atri The King of the Golden River The Village Blacksmith	Darius Green Horatius at the Bridge Rip Van Winkle	Excelsior Lincoln's Gettysburg Address The Man without a Country	The Courtship of Miles Standish The Great Stone Face To a Waterfowl
Grade VII	Before Coins were Made King Arthur Stories Rip Van Winkle	How They Brought the Good News Lincoln's Gettysburg Address The Wonderful One-Hoss Shay	The Great Stone Face The Lady of Shalott Marco Boz aris	The Chambered Nautilus Thanatopsis What Constitutes a State
Grade VIII	The Legend of Sleepy Hollow The Minting of Coins The Wreck of the Hesperus	Evangeline How I Killed a Bear Lincoln's Gettysburg Address	The Descent into the Maelstrom The Great Stone Face Julius Caesar	Gray's Elegy The Skeleton in Armor The Vision of Sir Launfal
High School	David Copperfield The Great Stone Face Ivanhoe The Lady of the Lake The Last of the Mohicans Silas Marner Treasure Island	The Descent into the Maelstrom Julius Caesar The Merchant of Venice Vanity Fair The Vision of Sir Launfal	Burke's Speech on Conciliation of American Colonies Hamlet Macbeth	Beowulf Essay on Milton Henry Esmond

* Cf. Uhl, *op. cit.*, pp. 130–145.

a. The Difficulty of the Proposed Material

State the number of pages which are easy, moderately difficult, difficult, and too difficult.

	Grades or Books													Total Pages	Per Cent of Total Pages
	1 A	1 B	2	3	4	5	6	7	8	9	10	11	12		
Easy															
Moderately difficult . .															
Difficult															
Too difficult															

6. Provisions for the Vocabulary Needs of Pupils

What indications are there that the vocabulary is suitable for the grade or grades for which the material is intended?

a. In case of books intended for the primary grades, is the vocabulary drawn from standard lists of words? Yes ——. No ——.

b. Is sufficient repetition of words provided?
Yes ——. No ——.

c. Is the repetition of words properly distributed?
Yes ——. No ——.

d. In the case of a series of books, do the later books make use of the vocabulary developed in the earlier books?
Yes ——. No ——.

e. Are new words added gradually? Yes ——. No ——.

f. Do the books intended for the primary grades contain tables which show the frequency of repetition of words?
Yes ——. No ——.

g. Is the series of readers so organized that phonetic drills can be conducted? Yes ——. No ——.

7. Provisions for Interests through which the Level of Pupils' Social Life Can Be Raised

a. State the number of pages that exemplify each social interest.

Social Interests	Grades or Books													Total Pages	Per Cent of Total Pages
	1A	1B	2	3	4	5	6	7	8	9	10	11	12		
Kindness															
Faithfulness and loyalty															
Sympathy															
Character study . . .															
Heroism and courage .															

b. Does the material possess a wholesome social and moral tone?
Yes ——. No ——.

If so, cite titles or passages which contribute to the following objectives.

(1) Tolerance

(2) Thoughtfulness of the rights of others (good sportsmanship)

(3) Sincerity

(4) Fair-dealing and honesty

(5)

(6)

(7)

c. In case the material is proposed for use in schools where religion is taught, is the emphasis satisfactory?
Yes ——. No ——.

8. Provisions for Aiding Teachers in the Use of the Material

a. Is special training necessary for successful use of the material? If so, why? Yes ——. No ——

b. Can an inexperienced teacher use the material successfully? Yes ——. No ——

If so, what devices or teaching helps are provided? (Check the types of helps.)

Manual ——

Lesson helps ——

—— ——

c. Does the material lend itself to the project method of teaching? Yes ——. No ——.

If so, what features are present? (Check the provisions made.)

Grouping of subject matter around central topics. ——

Material which can be correlated with that of other school subjects. ——

Suggestions in an accompanying manual. ——

d. Do the illustrations, if any, aid in the teaching or are they merely decorative? Aid ——. No aid ——.

9. The Physical Make-up of the Book or Books under Consideration

	Satisfactory	Unsatisfactory	Remarks
a. Size of book or books			
Convenience as to size			
Convenience as to weight			
b. Binding			
Flexible stitching			
Durability			
Cover design			
General attractiveness			
c. Appearance of the page			
Margins			
Placement of illustrations			
Length of lines			
Spacing of lines			
Unglazed paper			
Tinted paper			
Durable paper			
d. Printing and type			
Clearness			
Size of type			
Style of type			
e. Illustrations			
Artistic			
Use of color			
Amount of illustration			

f. State the number of illustrations of each of the following sizes.

The Sizes of Illustrations	Grades or Books													Total Pages	Per Cent of Total Pages
	1A	1B	2	3	4	5	6	7	8	9	10	11	12		
Full page															
¾ page															
½ page															
¼ page															
Other sizes															

10. Summary of Judgments

a. Is the content distinctly superior? Yes ——. No ——.
b. Is the organization distinctly superior? Yes ——. No ——.

c. Is the method (in case of method books) distinctly superior?
Yes ——. No ——.

d. Are the aids for teachers' use distinctly superior?
Yes ——. No ——.

e. Are the aids for pupils' use distinctly superior?
Yes ——. No ——.

f. Is the physical make-up of the book distinctly superior?
Yes ——. No ——.

g. Is the material, if not in a single series of books, readily accessible? Yes ——. No ——.

h. Do you recommend the adoption of the book or books?
Yes ——. No ——.

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